OPERATORS MANUAL

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MIDAS Legend 3000 Console
Operators Manual DOC02-L3000
Issue 1.2 - March 2004

Due to a policy of continual product improvement, specification
and features may be subject to change without notice.

MIDAS
DESIGNED FOR A PURE PERFORMANCE

IMPORTANT SAFETY INSTRUCTIONS

These symbols are internationally accepted symbols that warn of potential hazards with electrical products.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments / accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Servicing is required when the apparatus is damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate

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KLARK TEKNIK SIGNAL PROCESSING BY DEFINITION

MIDAS DESIGNED FOR A PURE PERFORMANCE

DECLARATION OF CONFORMITY

We, **Klark Teknik Group (UK) Plc**

of, Klark Teknik Building, Walter Nash Road, Kidderminster, Worcestershire, DY11 7HJ.

Declare that a sample of the following product:-

Product Type Number	Product Description	Nominal Voltage (s)	Current	Freq
Legend 3000	Professional Audio Mixing Desk	115V AC 230V AC	5.0A 2.5A	50/60Hz

to which this declaration refers, is in conformity with the following directives and/or standards:-

Directive(s)	**Test Standard(s)**
Generic Standard using EN55103 Limits and Methods	*EN50081/2*
Class B Conduct Emissions	*EN55103*
Class B Radiated Emissions	*EN55103*
Fast Transient Bursts	*EN61000-4-4*
Static Discharge	*EN61000-4-2*
Basic Electrical Safety	*EN60204*
LVD	*EN60065*
Harmonics	*EN61000-3-2*
Flicker	*EN61000-3-3*

Signed:.....

Date: 19th March 2002

Name: David Hoare

Authority: Technical Director, Klark Teknik Group (UK) Plc

Attention!
Where applicable, the attention of the specifier, purchaser, installer or user is drawn to special limitations of use which must be observed when these products are taken into service to maintain compliance with the above directives. Details of these special measures and limitations to use are available on request and are available in product manuals.

ATTENTION!

The following special limitations apply to the console and must be observed in order to maintain safety and electromagnetic compatibility performance:

POWER CONNECTION
The console should only be operated with the power supply connected to ground via its mains supply connector.

CONTROL CONNECTIONS
The console should only be operated with high quality screened control cables. All connector shells should be of metal construction so that they provide a screen when they are plugged into the console. All ground connections should be made as shown on the connections page (over leaf).

AUDIO CONNECTIONS
The console should only be operated with high quality screened twisted pair audio cables. All connector shells should be of metal construction so that they provide a screen when they are plugged into the console. All ground connections should be made as shown on the connections page (over leaf).

ELECTRIC FIELDS
If the console is operated in an electromagnetic field that is amplitude modulated by an audio frequency signal, the signal to noise ratio may be degraded. Degradation of up to 60dB may be experienced under extreme conditions (3V/m, 90% modulation).

INSTALLATION

There are a number of points to consider when installing a mixing console. Many of these points will have been addressed before the console is even unpacked but it is worth repeating them.

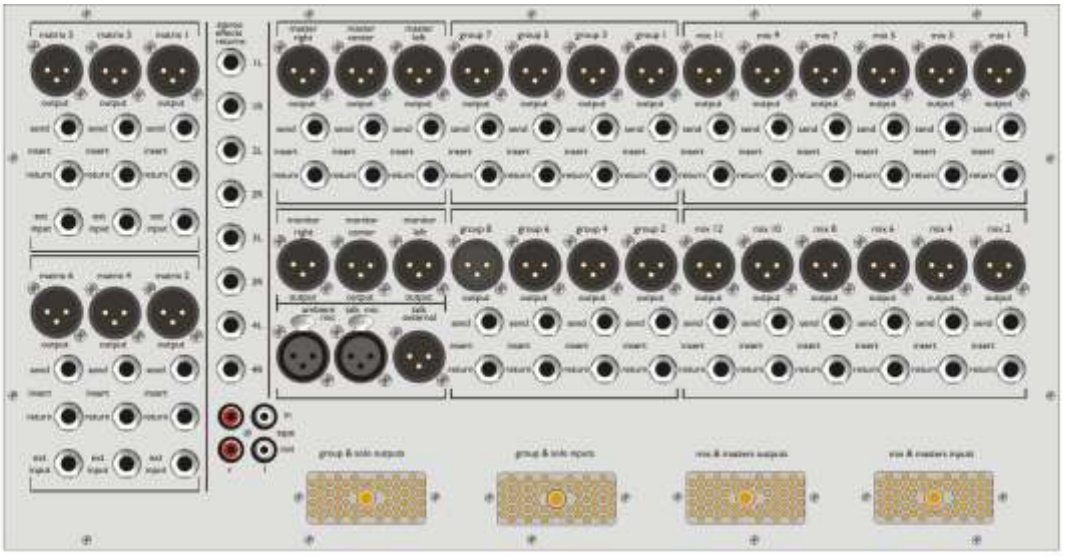
POSITION
The console should be located in a convenient space commensurate with the use to which the console is being put. Ideally a cool area is preferred not in close proximity to power distribution equipment or other potential sources of interference. Provision should be made for some flat surface surrounding the console to prevent people using it as a table top.

POWER
The power supply should be located as far from the console as the connecting cable will allow. It should be set for the appropriate line voltage and plugged into the mains outlets using the supplied cables.

THE POWER SUPPLY SHOULD NEVER BE OPERATED WITH THE MAINS EARTH DISCONNECTED

Please note that the power supply contains LETHAL VOLTAGES greatly in excess of the mains voltage and that its rails can produce extremely large currents which could burn out equipment and wiring if shorted. All testing and servicing should ONLY be carried out by qualified engineers.

LEGEND 3000 CONNECTORS



Terminator

Consoles can be linked using the Midas Can Bus. Depressing the terminator defines the end of the chain and prevents any possible unwanted signal being sent back up the chain.

MIDI In	**MIDI Thru**	**MIDI Out**
Pin 2: Ground	Pin 2: Ground	Pin 2: Ground
Pin 4: In+	Pin 4: In+	Pin 4: In+
Pin 5: In-	Pin 5: In-	Pin 5: In-

Midas Can Bus

Pin 1: +18V (100mA max)
Pin 2: Can low
Pin 3: OV Can
Pin 4: Can High
Pin 5: -18V(100mA max)

RS-232

Pin 2: Receive Data
Pin 3: Transmit Data
Pin 5: GND

Input Send / Return

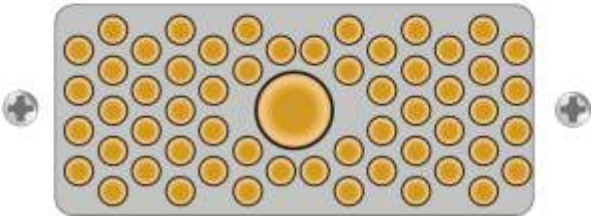
Tip: Hot
Ring: Cold
Sleeve: Ground

Input / Output XLR

Pin 1: Ground
Pin 2: Hot
Pin 3: Cold

56 Way Edac Connector

(see page 41for wiring details)



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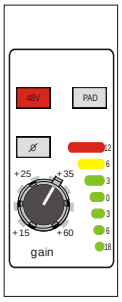
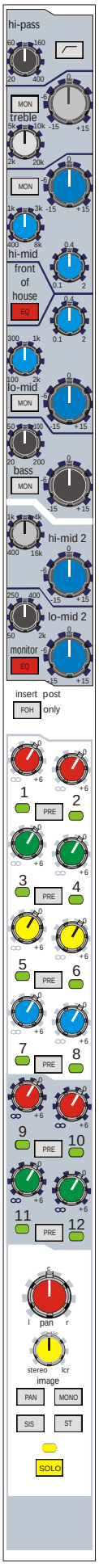
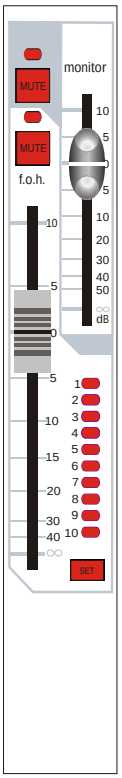






Midas L3001 Mono Input Module

Input Pod

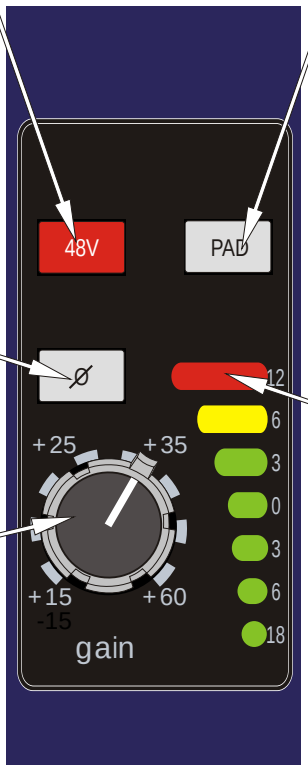
The 48V switch connects 48 volt phantom power to the XLR mic input connector. This is suitable for a condenser microphone or DI box. A parallel line input is also provided via a jack which is protected from application of 48V.

There is a global disable for the 48V on the Talk Back section -see page12.

Note:- Connecting a jack plug disconnects the XLR input.

The PHASE switch activates a 180 degrees phase change within the input amplifier.

The GAIN control gives continuous adjustment of the input amplifier gain from + 15dB to + 60dB.



The PAD switch gives 30dB of attenuation to the input signal which will allow the connection of high output microphones or line level signals.

The METER monitors the peak signal level of the main (FOH) input channel pre fader signal path.

FOH EQ

The HI PASS filter control is continuously adjustable from 20Hz to 400Hz.

The MON switch connects the treble EQ to operate in the monitor signal path as well as the front of house signal path.

The treble FREQ. control gives continuous adjustment of the frequency range that the treble equaliser acts on from 2KHz to 20KHz. The treble equaliser has a shelving response.

The MON switch connects the hi mid EQ to operate in the monitor signal path as well as the front of house signal path.

The hi mid FREQ. control gives continuous adjustment of the frequency range that the hi mid equaliser acts on from 400Hz to 8KHz.

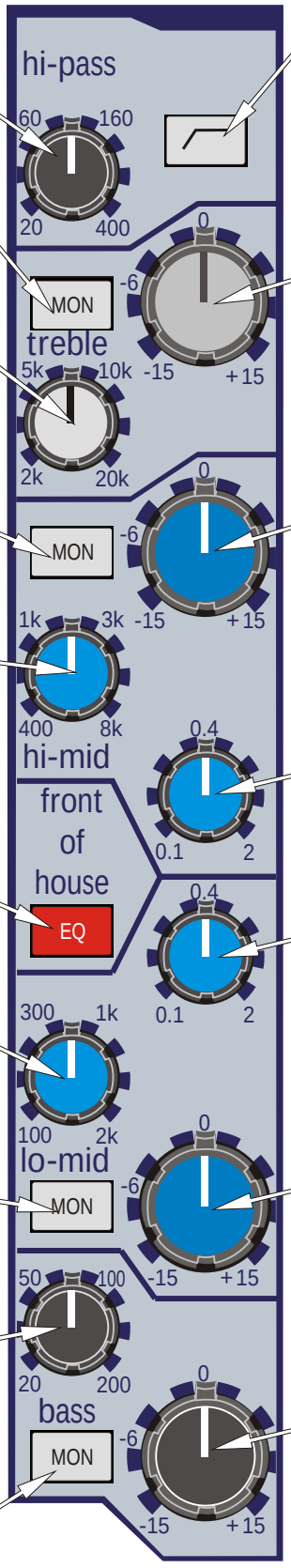
The FOH EQ switch connects the equaliser into the front of house signal path.

The lo mid FREQ. control gives continuous adjustment of the frequency range that the lo mid equaliser acts on from 100Hz to 2KHz.

The MON switch connects the lo mid EQ to operate in the monitor signal path as well as the front of house signal path.

The bass FREQ. control gives continuous adjustment of the frequency range that the bass equaliser acts on from 20Hz to 200Hz. The bass equaliser has a shelving response.

The MON switch connects the bass EQ to operate in the monitor signal path as well as the front of house signal path.



The HI PASS switch connects the filter in the input channel signal path before the insert point and equaliser.
NOTE:- the signal path beyond this point is split into two - FOH and MON.

The TREBLE control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The HI MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The hi mid WIDTH control gives continuous adjustment of bandwidth from 0.1 to 2 octaves with a 0.4 octave centre point.

The lo mid WIDTH control gives continuous adjustment of bandwidth from 0.1 to 2 octaves with a 0.4 octave centre point.

The LO MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The BASS control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

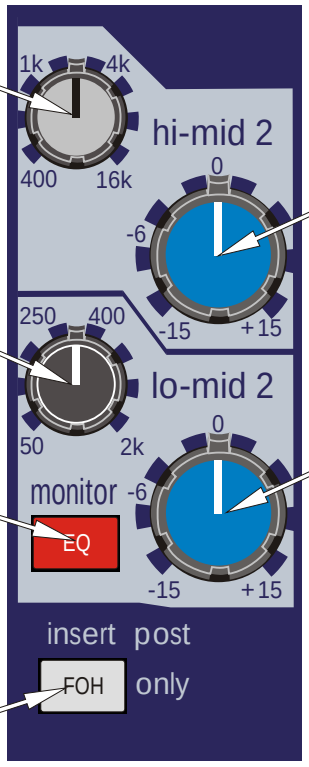
MON EQ

The hi mid FREQ. control gives continuous adjustment of the frequency range that the hi mid equaliser acts on from 400Hz to 16KHz.

The lo mid FREQ. control gives continuous adjustment of the frequency range that the hi mid equaliser acts on from 50Hz to 2KHz.

The MON EQ switch connects the equaliser into the monitor signal path including any sections assigned to it from the front of house EQ.

The insert defaults to be pre EQ but the insert POST (FOH only) switch changes the insert position to be post the front of house EQ (i.e. it will not act upon monitor signals).



The HI MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The LO MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

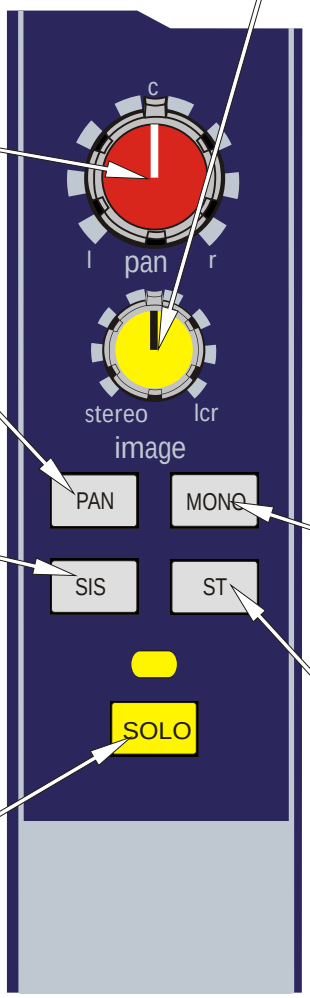
The AUX controls (1 to 12) give continuous adjustment of the level sent from the input channel to the aux busses. The level adjustment is from + 6dB to off. All aux busses can be globally assigned to derive signals from the FOH signal path or MON signal path. The switch to do this is located on the mix output module.

Aux send ON/OFF switching is achieved using the console assignment system. A routing LED below the aux control provides indication of status, RED being POST fader and GREEN being PRE fader. The assignments may also be stored as part of a snapshot scene.

The aux PRE switches change the signal sent to the aux busses from post fader to pre fader and this is confirmed by a led colour change on the bus routing LEDs.

When the spatial imaging system is active the IMAGE control can modify the action of the pan control so as to place the channel within a three speaker system. When the image control is fully clockwise the pan control will operate in full left, centre, right such that a centre panned signal will route to the centre speaker only and will not appear in either of the left or right outputs. When the image control is fully anti-clockwise the pan control reverts to stereo such that a centre panned signal will route at equal power to the left and right speakers. All other Image control positions generate a composite blend of the stereo and LCR panning systems so that the optimum degree of centre image focus and speaker power can be obtained. When the image control and pan control are both set central the channel will be routed with equal power to all three speakers.

The PAN defaults to control the channel placement within the master stereo mix and has a constant power law. i.e. - 3dB at the centre position.



The PAN switch changes all group bus assignments to operate via the stereo pan pot.

The SIS switch enables the spatial imaging system which operates in conjunction with the pan control to produce a left, centre, right master mix.

The MONO switch connects the post fader channel signal to the mono master bus.

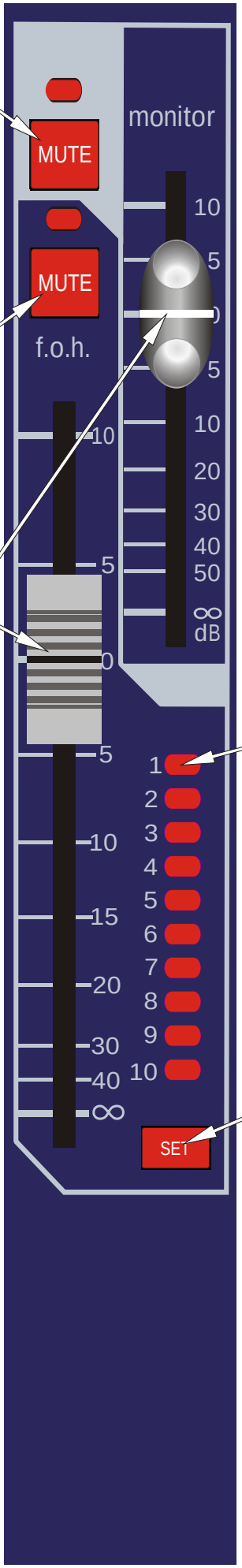
The ST switch connects the post fader channel signal to the master stereo bus via the pan control.

The SOLO switch sends input monitor channel signals to the MON PFL/AFL busses and sends input front of house channel signals to the FOH PFL/AFL stereo busses. If the switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second the latching is disabled and when the switch is released the channel solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. The SOLO ADD mode switch on the master module defeats the auto cancelling and allows multiple channel monitoring. If the master module SOLO SIS is enabled the front of house solo buses will switch to LCR operation.

The MON MUTE switch mutes the monitor input channel signal path at all points after the insert send. The switch can be controlled from snapshot automation.

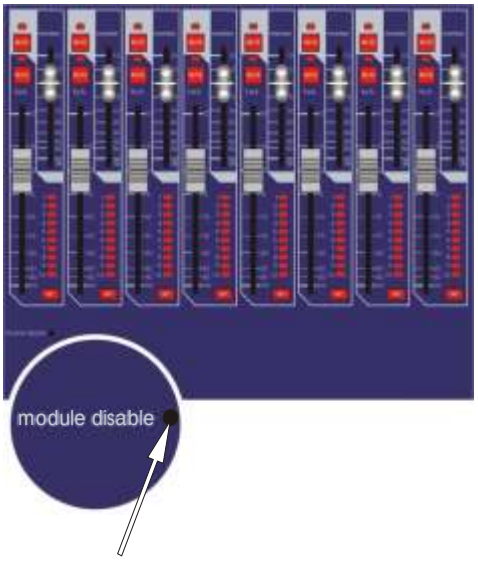
The FOH MUTE switch mutes the front of house input channel signal path at all points after the insert send. The switch can be controlled from snapshot automation.

The MON and FOH FADERS give independent adjustment of the monitor and front of house input channel levels from + 10dB to off.



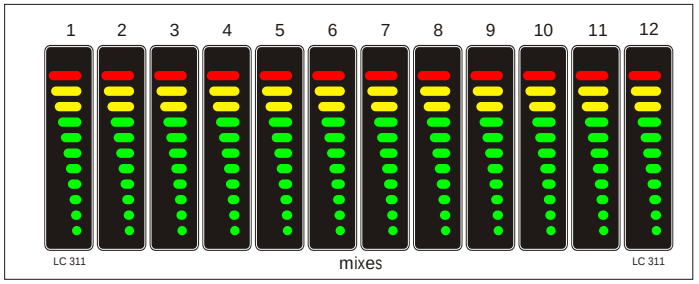
The 10 ASSIGN led's are used to show the status of the VCA-FOH, VCA-MON, and AUDIO group assignments. The central controller MODE switches toggle through the four available states (the fourth state being AUX where status is displayed close to the aux controls).

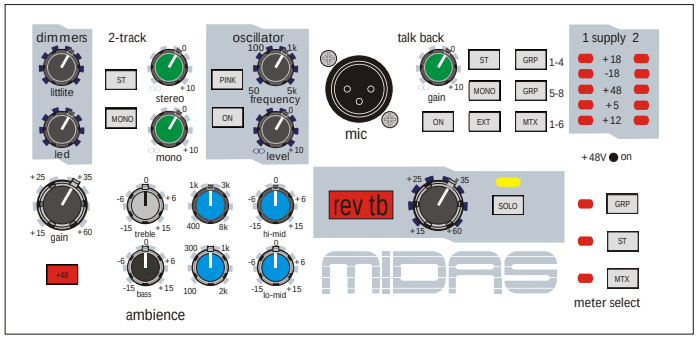
The SET switch is used to programme the channel AUX, VCA-FOH, VCA_MON and AUDIO group assignment. The central controller MODE switches and ASSIGN keys select the desired assignment function and the SET switch toggles the channel on and off with each alternate press.

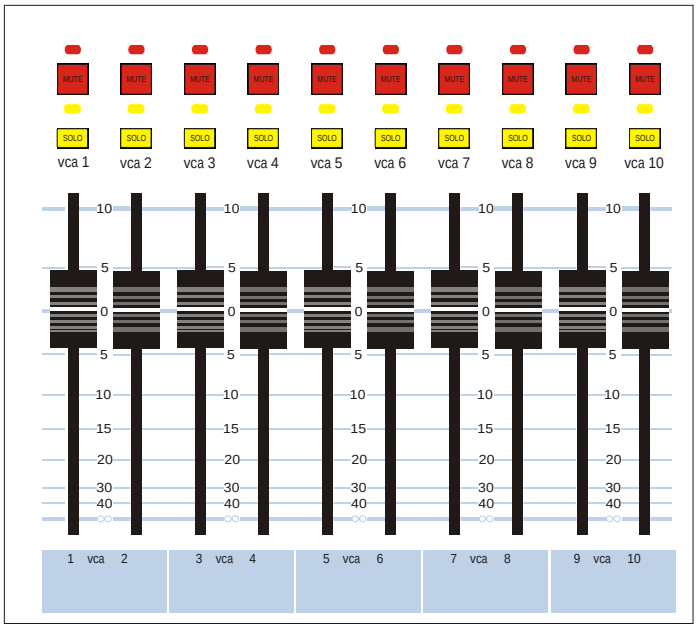


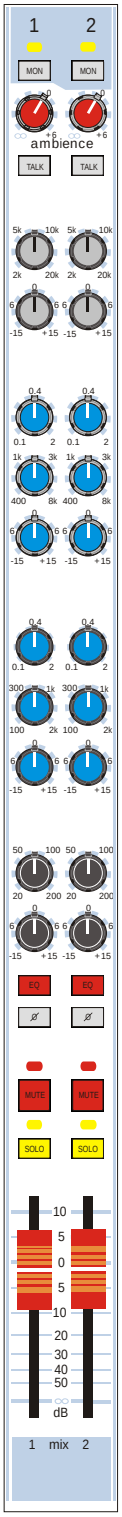
The “module disable” is not intended for normal use, however, if the automation systems fail, this switch can be used to stop unwanted scene updates and set the module to a default state.

Midas L3011 Mix Output Module



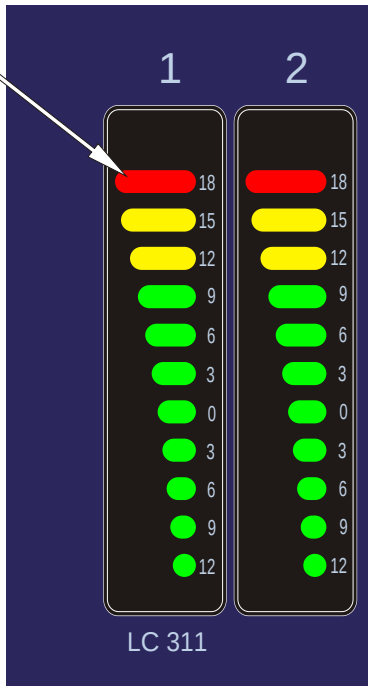




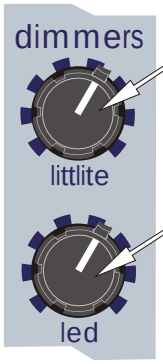


Meter Section

The METER monitors the peak signal level of the post fader mix outputs.



Talk Back Section

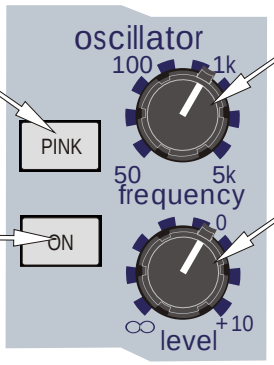


The LAMP BRIGHTNESS control is a dimmer for the console littlites.

The LED BRIGHTNESS control is a dimmer for the console surface led's.

The PINK switch overrides the oscillator by giving a pink noise output.

The GENERATOR ON switch connects the signal generator output to the console's internal talk busses and to the talk external output XLR.



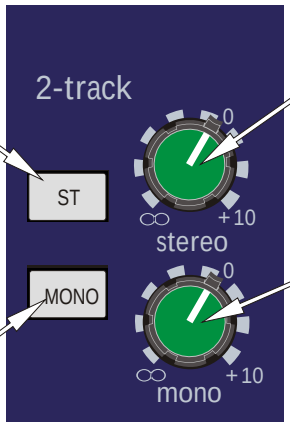
The FREQ. control gives continuous adjustment of the oscillator frequency from 50Hz to 5K.

The generator LEVEL control gives continuous adjustment of the signal generator peak output signals from +10dBu to off.

The tape inputs provide a feed from an unbalanced phono source to the stereo and or mono master busses.

The tape to ST switch connects the tape inputs to the stereo master busses.

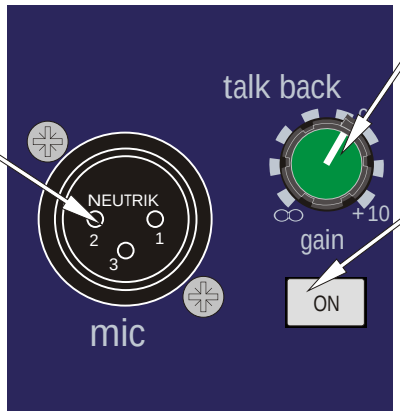
The tape to MONO switch connects the tape inputs to the mono master bus.



The ST LEVEL control provides nominal adjustment from +10 to off.

The MONO LEVEL control provides nominal adjustment from +10 to off.

The TALK XLR socket accepts balanced 150 Ohm microphone signals. The microphone amplifier gain is factory set to 50dB and operates in conjunction with a peak limiter which is set to +10dBu.



The talk LEVEL gives continuous adjustment of the post limiter signals from +10dB to off.

The TALK MIC ON switch connects the signal talk mic output to the console's internal talk busses and to the talk external output XLR. At the same time it also dims all the local monitor outputs by 20dB to prevent howl round.

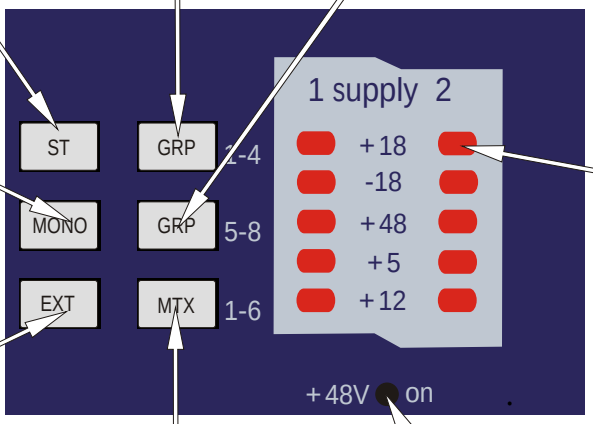
The talk to GRP 1-4 switch connects the talk mic and generator circuits to group 1,2,3 and 4 busses.

The talk to GRP 5-8 switch connects the talk mic and generator circuits to group 5,6,7 and 8 busses.

The talk to ST switch connects the talk mic and generator circuits to the stereo master busses.

The talk to MONO switch connects the talk mic and generator circuits to the mono master bus.

The talk to EXT switch connects the talk mic and generator circuits to the external output.

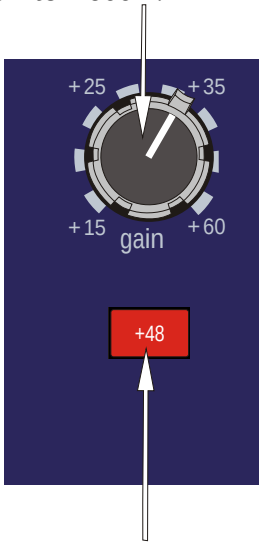


The POWER indicators show the status of all rails on both power supplies.

The talk to MTX switch connects the talk mic and generator circuits to ALL matrix busses.

The 48V ON switch activates (or safes) the connection of 48V to the input modules.

The ambience GAIN control gives continuous adjustment of the ambient mic amplifier gain from + 15dB to + 60dB.

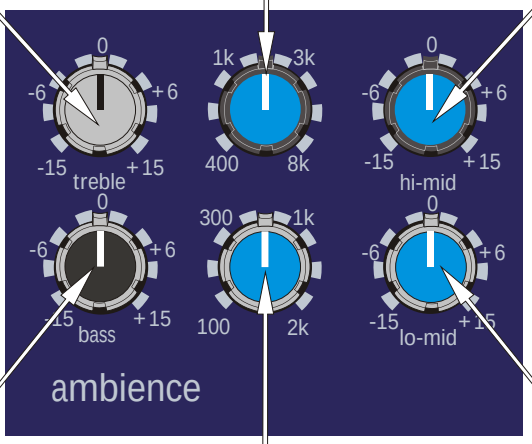


The 48V switch connects 48 volt phantom power to the ambienceXLR mic input connector.

The hi mid FREQ. control gives continuous adjustment of the frequency range that the hi mid equaliser acts on from 400Hz to 8KHz.

The TREBLE control gives continuous adjustment of the treble equaliser boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The HI MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.



The BASS control gives continuous adjustment of the bass equaliser boost and cut from + 15dB to - 15dB with a 0dB centre detent.

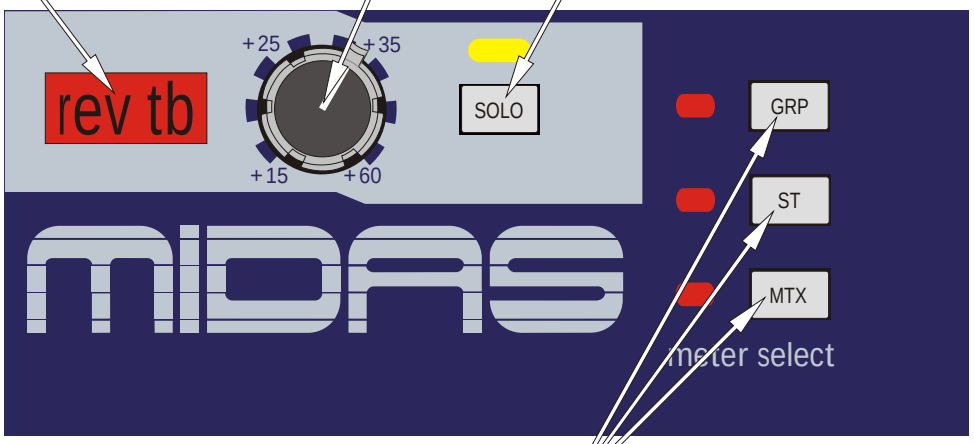
The LO MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The lo mid FREQ. control gives continuous adjustment of the frequency range that the lo mid equaliser acts on from 100Hz to 2KHz.

The return talk back GAIN control gives continuous adjustment of the talk back mic amplifier gain from + 15dB to + 60dB. 48V phantom power is connected to this XLR input connector.

A large led display illuminates when signals are present on the return talk back to prompt the operator to solo the signal.

The return talk back SOLO switch connects the talk signal onto the solo busses so that it can be monitored.



The METER SELECTOR switches assign the master meters to monitor Group, Stereo Return or Matrix signals.

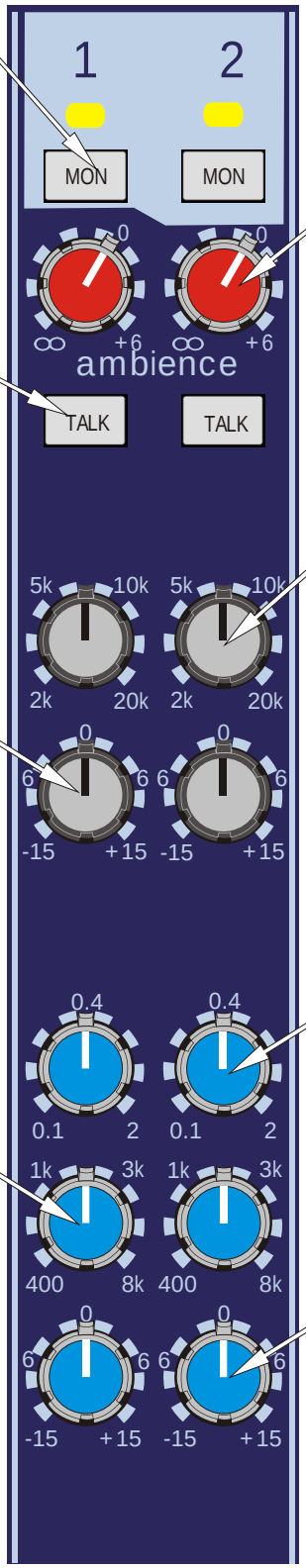
Mix Section

The MON switch acts globally across a single mix bus. It changes the input module and stereo aux return module sends so that they derive signal from their monitor signal paths in place of their front of house signal paths.

The TALK switch connects the talk mic and generator circuits to the mix bus.

The TREBLE control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The hi mid FREQ. control gives continuous adjustment of the frequency range that the hi mid equaliser acts on from 400Hz to 8KHz.



The AMBIENCE level control provides a way to mix signals from an external microphone via an on board mic amp onto the mix bus. The control gives continuous adjustment from +6dB to off.

The treble FREQ. control gives continuous adjustment of the frequency range that the treble equaliser acts on from 2KHz to 20KHz. The treble equaliser has a shelving response.

The hi mid WIDTH control gives continuous adjustment of bandwidth from 0.1 to 2 octaves with a 0.4 octave centre point.

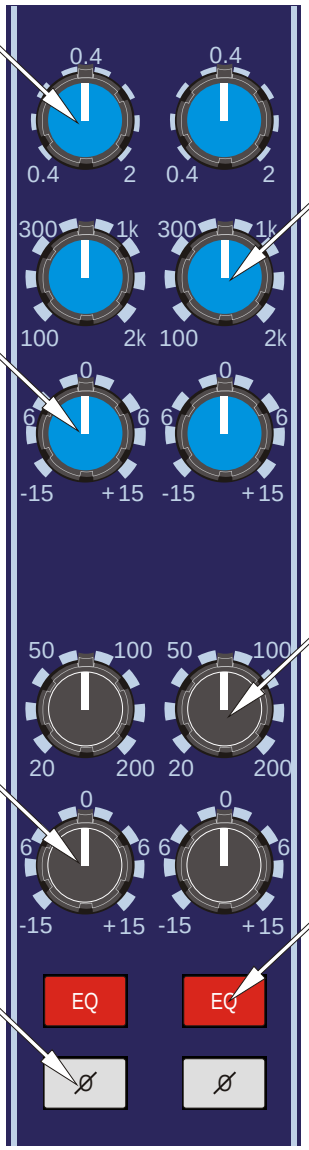
The HI MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The lo mid WIDTH control gives continuous adjustment of bandwidth from 0.1 to 2 octaves with a 0.4 octave centre point.

The LO MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The BASS control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The PHASE switch activates a 180 degrees phase change within the post fader signal path.

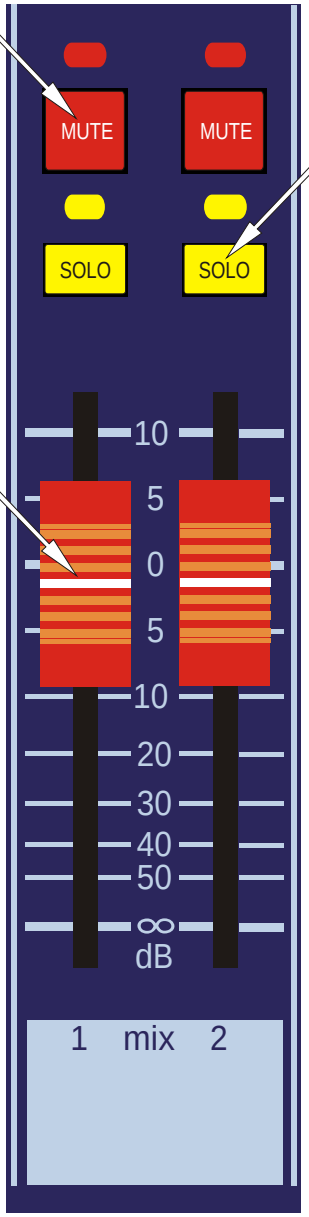


The lo mid FREQ. control gives continuous adjustment of the frequency range that the lo mid equaliser acts on from 100Hz to 2KHz.

The bass FREQ. control gives continuous adjustment of the frequency range that the bass equaliser acts on from 20Hz to 200Hz. The bass equaliser has a shelving response.

The EQ switch connects the equaliser into the mix output signal path.

The MUTE switch mutes the mix output. The switch can be controlled from snapshot automation.



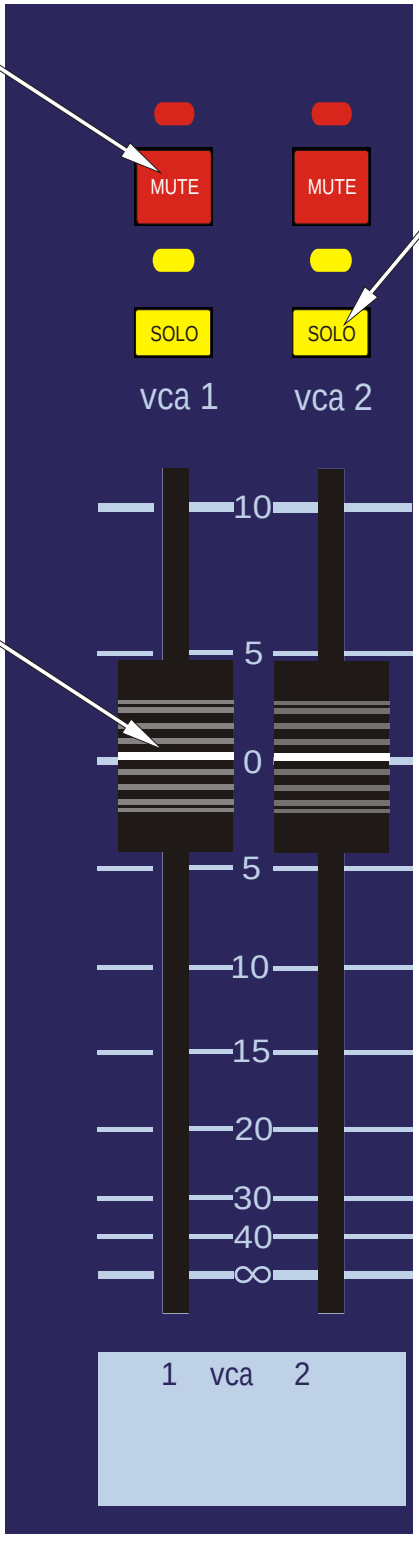
The SOLO switch sends mix signals to the MON PFL/AFL busses and the FOH PFL/AFL stereo busses. If the switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second the latching is disabled and when the switch is released the channel solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. The SOLO ADD mode switch on the master module defeats the auto cancelling and allows multiple channel monitoring.

The MIX FADER provides continuous adjustment of mix levels from + 10dB to off.

VCA Master Section

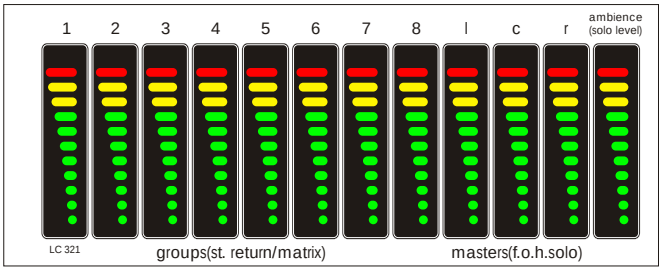
The VCA MUTE switch acts on the pre and post fader signals of any input channels which are assigned to the VCA master. The switch can be controlled from snapshot automation. If desired the MUTE can be changed to operate as an independent AUTO MUTE switch. This is setup in the SYSTEM menu on the central automation control.

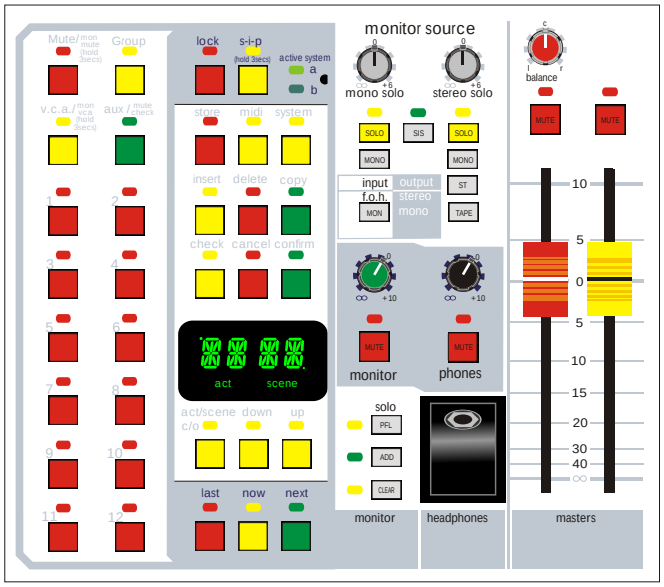
The VCA MASTER FADER controls the output level of any input channels which are assigned to the VCA master from +10dB to off.

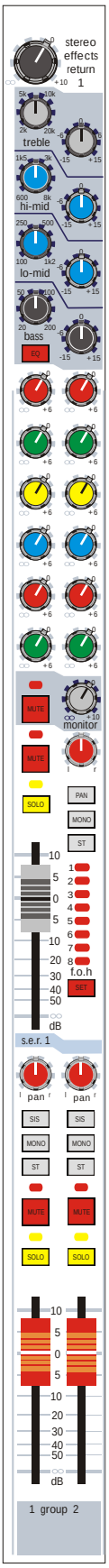


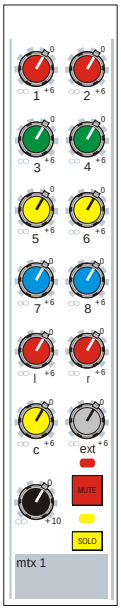
The VCA SOLO switch is used to monitor the VCA master fader by creating a mix on the solo busses which consists of all input channels which are assigned to the VCA master. If a VCA solo switch is pressed for a short time it will latch on or off, but if it is held on for more than 1 second the latching is disabled and when the switch is released the solo will turn off. When the console is operating in SOLO ADD MODE input channels have priority over VCA solos and will temporarily override them.

MIDAS L3021 Masters Module



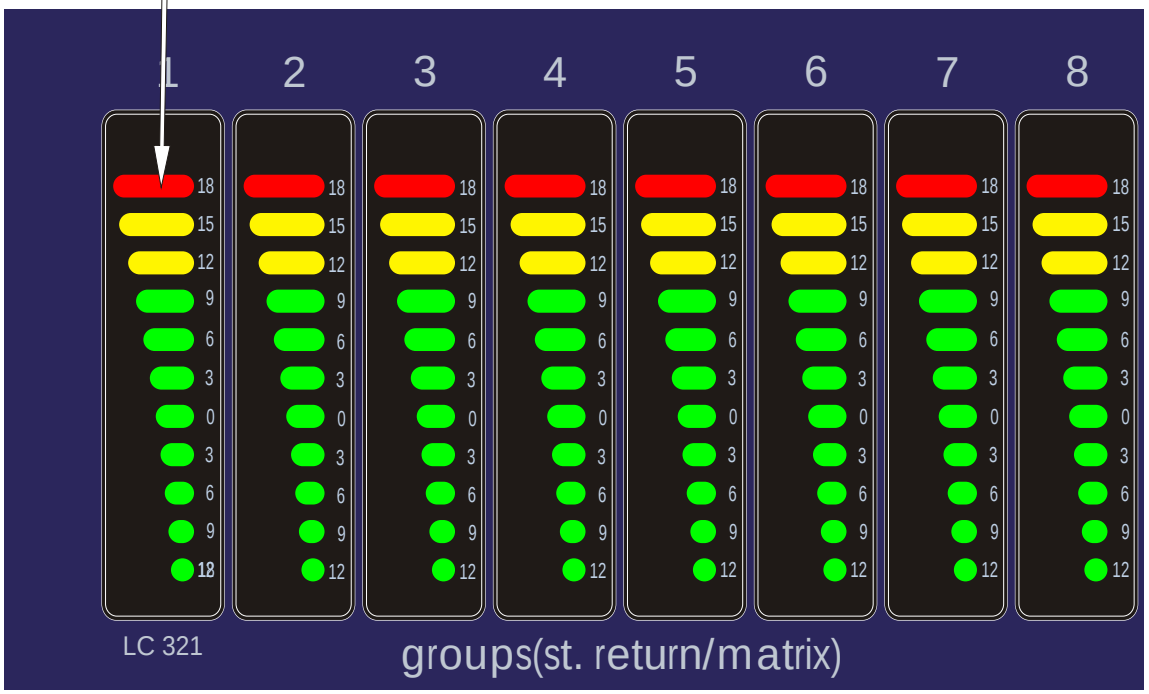






Aux Return Section

The METER monitors the peak signal level of the Group, Stereo Return or Matrix signals. Selection is made via the Meter Selector switches on the talk back section of the output module.



The STEREO EFFECTS RETURN LEVEL control provides nominal adjustment of input signals from +10 to off.

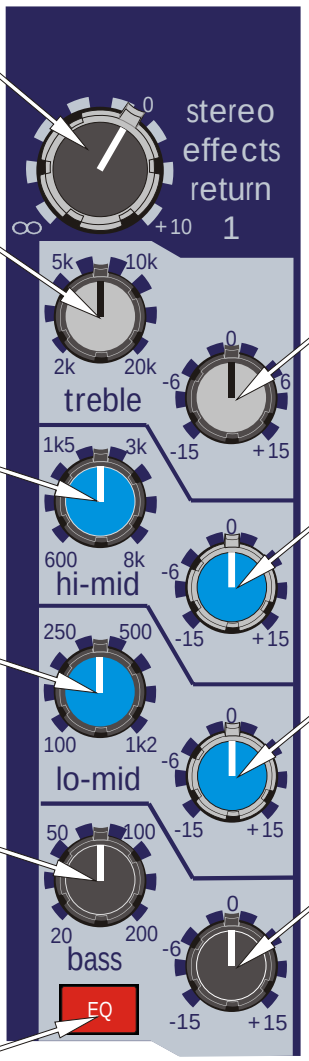
The treble FREQ. control gives continuous adjustment of the frequency range that the treble equaliser acts on from 2KHz to 20KHz. The treble equaliser has a shelving response.

The hi mid FREQ. control gives continuous adjustment of the frequency range that the hi mid equaliser acts on from 600Hz to 8KHz.

The lo mid FREQ. control gives continuous adjustment of the frequency range that the lo mid equaliser acts on from 100Hz to 1.2KHz.

The bass FREQ. control gives continuous adjustment of the frequency range that the bass equaliser acts on from 20Hz to 200Hz. The bass equaliser has a shelving response.

The EQ switch connects the equaliser into the stereo effects return signal path.



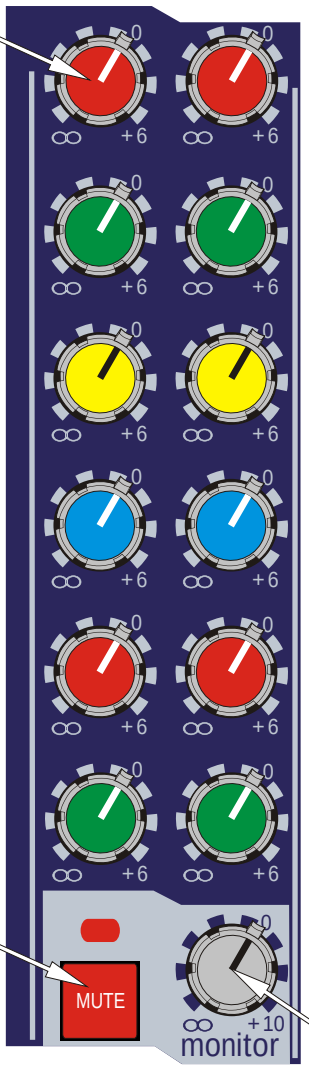
The TREBLE control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The HI MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The LO MID control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The BASS control gives continuous adjustment of boost and cut from + 15dB to - 15dB with a 0dB centre detent.

The AUX controls (1 to 12) give continuous adjustment of the level sent from the stereo effects return to the aux busses. The level adjustment is from + 6dB to off. All aux busses can be globally assigned to derive signals from the FOH signal path or MON signal path. The switch to do this is located on the mix output module.



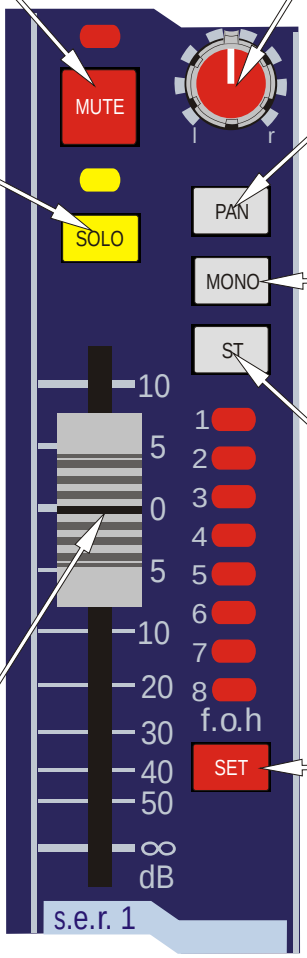
The MON MUTE switch mutes the stereo effects return monitor signal path at all points. The switch can be controlled from snapshot automation.

The MON LEVEL control gives independent adjustment of the stereo effects return monitor levels from + 10dB to off.

The FOH MUTE switch mutes the front of house stereo effects return signal path at all points. The switch can be controlled from snapshot automation.

The SOLO switch sends stereo effects return monitor channel signals to the MON PFL/AFL busses and sends front of house stereo effects return signals to the FOH PFL/AFL stereo busses. If the switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second the latching is disabled and when the switch is released the channel solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. The SOLO ADD mode switch on the master module defeats the auto cancelling and allows multiple channel monitoring.

The FOH FADERS give independent adjustment of the front of house stereo effects return levels from + 10dB to off.



The PAN defaults to control the channel placement within the master stereo mix and has a constant power law. i.e. - 3dB at the centre position.

The PAN switch changes all group bus assignments to operate via the stereo pan pot.

The MONO switch connects the post fader stereo effects return signal to the mono master bus.

The ST switch connects the post fader stereo effects return signal to the master stereo bus via the pan control.

The SET switch is used to programme the stereo effects return audio group assignment. The central controller MODE switches and ASSIGN keys select the desired audio group and the SET switch toggles the stereo effects return on and off the bus with each alternate press.

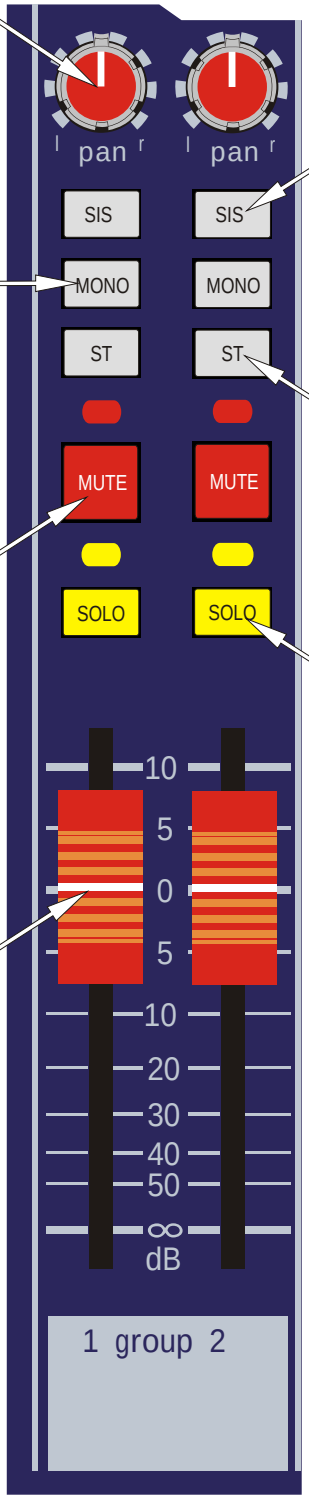
Group Section

The PAN defaults to control the placement of the group signals within the master stereo mix and has a constant power law. i.e. - 3dB at the centre position.

The MONO switch connects the post fader group signal to the mono master bus.

The MUTE switch mutes the group signal path at all points after the insert send. The switch can be controlled from snapshot automation.

The group FADER provides adjustment of the group levels from + 10dB to off.



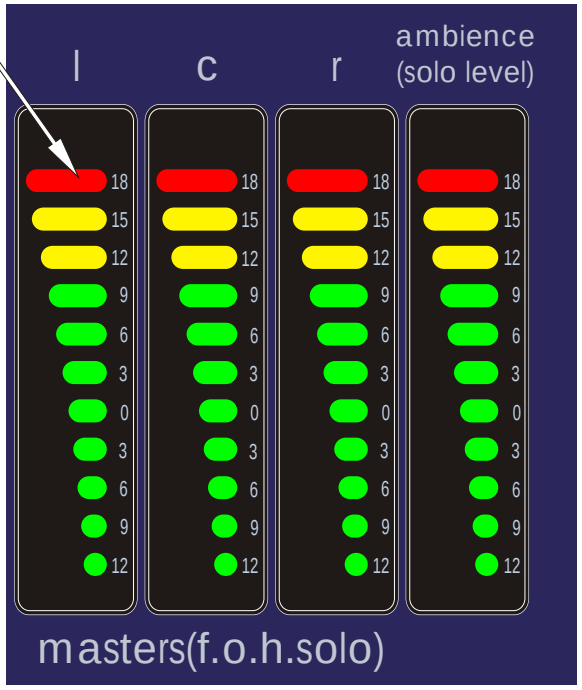
When SIS is active the pan control is changed so as to place the group within a three speaker system.

The ST switch connects the post fader group signal to the master stereo bus via the pan control.

The SOLO switch sends group signals to the MON PFL/AFL busses and the FOH PFL/AFL stereo busses. If the switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second the latching is disabled and when the switch is released the channel solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. The SOLO ADD mode switch on the master module defeats the auto cancelling and allows multiple channel monitoring.

The METERS directly above the matrix section are used to monitor the peak signal levels of the Masters and Solo Monitors. Meter selection defaults to Master L, C, R and Ambient input but when a solo is active the meters show FOH solo L, C, R and Monitor solo levels. If the solo is monitored pre fade the meters follow this selection also and provide pre fade metering (in mono).

Matrix metering is provided for in the Mix output section.

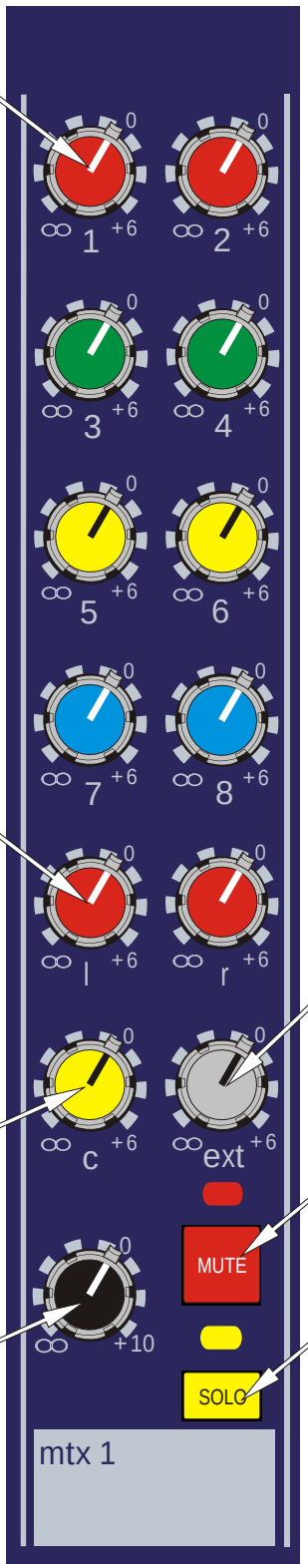


The MATRIX SEND rotary controls (1 to 8) give continuous adjustment of the levels sent from the group outputs to the matrix busses. The level adjustment is from + 6dB to off.

The LEFT/RIGHT rotary controls give continuous adjustment of the levels sent from left and right master outputs to the matrix busses. The level adjustment is from + 6dB to off.

The CENTRE (mono) rotary control gives continuous adjustment of the levels sent from the mono master output to the matrix busses. The level adjustment is from + 6dB to off.

The matrix LEVEL control gives continuous adjustment of output levels from +10dB to off.



The EXT input control gives continuous adjustment of the direct input level from +6dB to off. The signal is summed on to the matrix bus.

The MUTE switch mutes the matrix post level control signals. The switch can be controlled from snapshot automation.

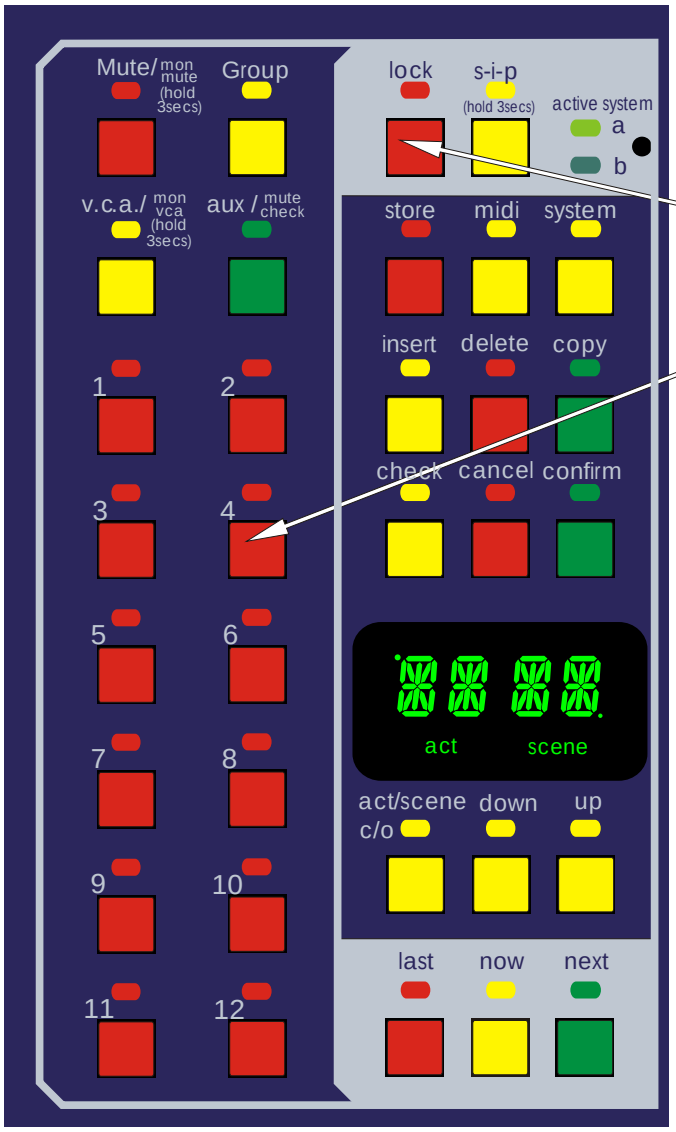
The SOLO switch sends matrix signals to the MON PFL/AFL busses and the FOH PFL/AFL stereo busses. If the switch is pressed for a short time it will latch on or off, but, if it is held on for more than 1 second the latching is disabled and when the switch is released the channel solo will turn off. As a default the solo system is auto cancelling so each new solo cancels the last. The SOLO ADD mode switch on the master module defeats the auto cancelling and allows multiple channel monitoring.

Automation Central Control Section

Assign Keys And Mode Switches

The VCA FOH, VCA MON, GROUP and AUX switches set the current assignment/display mode for the input module assign LEDs. As a default these switches interlock so that only one mode can be viewed at a time, however if they are pressed down for more than 0.5 second the interlock is removed. This is used for "clear mode" (see below).

If the VCA FOH and VCA MON MUTES have been selected for operation independent from the VCAs (in the SYSTEM menu) they can be selected by pressing the VCA switches for 3 seconds.



The ASSIGN KEYS are used to change settings for input VCA FOH, VCAMON, audio group or aux assignment in conjunction with the SET switch on each channel as follows:-

To enter ASSIGNMENT mode first press the LOCK switch (to un-lock the assignment system).

Press the ASSIGN KEYS to set up the required group number or numbers; a long press will allow multiple assignment where as a short press will clear the previous settings.

Press the SET switch on the input channels to which the assignment is required. Again there are two ways to do this; a long press will remove all prior settings on the input and replace them with the new assignment; a short press will toggle the state of any switches within the assignment set up. i.e. if assign keys one and two are on. Pressing the input SET switch will cause that channel to toggle the number one and two assignments for the channel either from off to on or visa versa.

To enter CLEAR mode set all the assign keys to off. To do this simply press the ones that are illuminated which will toggle them off.

In this mode operating an input SET switch with a long press will clear all assignments. The mode switches can be used to select which parts are cleared, i.e. press VCA mode to clear VCA's, press GROUP mode to clear group routing, or use a long press to activate more modes for simultaneous clearing.

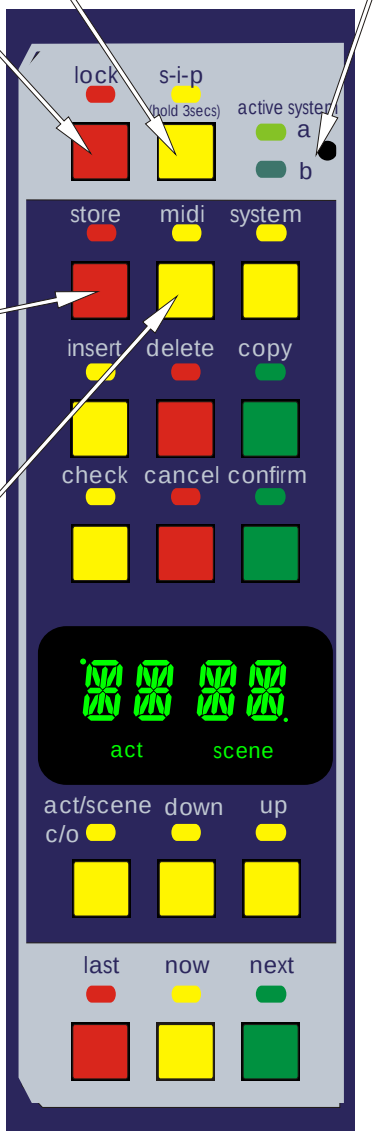
Snapshot Automation System

The SOLO IN PLACE switch sets the console to solo in place mode. In this mode any input solo that is pressed activates a mute of all the other channels. To protect against accidental operation the solo in place switch must be pressed for 3 seconds before it will operate.

The LOCK switch will toggle state each time it is pressed. When the LOCK switch is illuminated all assignment changes are disabled. The console will automatically revert to a locked state if no assignment controls are operated within a 90 second period.

Operating the STORE key will store the current console assignments and settings to the snap shot being displayed on the numeric display.

The MIDI key allows the operator to edit the snap shot MIDI information. On entering this mode the operator will be presented with a menu of the four MIDI messages that are stored within each snap shot, its operation is similar to the system menu.



The A/B switch selects which micro card is controlling the console assignment and automation systems.
This is a major function! *At the point of change over there is no defined control of the console signals. The A/B switch should there for be treated with the same cautions used at console power up/down.*

For reliability the assignment and automation systems are 100% duplicated. The console can operate on either of the systems. All snap shots are stored on BOTH of the systems. The LEDs indicate the status of each system in the following manner:-

- LED green indicates which system is active
- LED off indicates which system is inactive
- LED red indicates that a system is damaged or not responding and that a service engineer must be called as soon as possible.

The system menu contains LOCK which defines the level of console operation. These levels are: -

TOTL All automation and assignment functions are disabled

A-LK All assignments work but automation is dissabled.

RCAL Only recall and assignment functions are available.

STOR Scene storage/editing, recall and assignment are operational

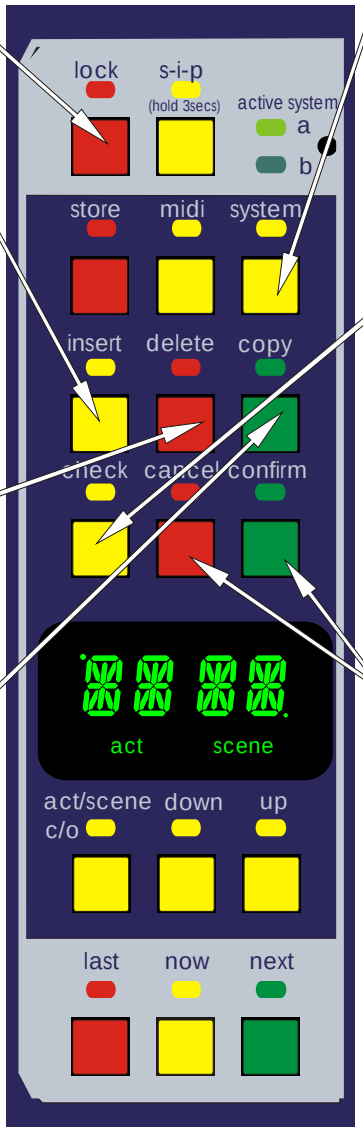
SYST All functions are available.

The COPY, DELETE and INSERT keys allow the operator to edit the snapshot sequence in the following manner:-

INSERT. Pressing this key will allow the operator to insert a snapshot at the number on the numeric display. The scene that was originally at the number and all con-current scenes will be re-numbered by adding one to their scene numbers.

DELETE will erase the snapshot that is currently being displayed on the numeric display from the automation memory.

COPY. This will copy the snapshot currently displayed on the numeric display to a temporary memory location. This can then be stored or inserted to a new scene number in the normal fashion.



The SYSTEM switch gives the operator access to the system menu. Navigation of the menu is achieved by using the UP/DOWN switches to select an entry and then pressing CONFIRM to execute the selected function or sub menu. To exit a menu or sub menu press CANCEL.

The CHECK switch provides a preview of the input module MUTE STATUS for any of the snapshot screen WITHOUT recalling the ACTUAL setting to the console surface (mutes are displayed on the ASSIGN LEDs so that the current mute status is always present and accurate). Whist in check mode the ACT/ SCENE C/O, and UP/DOWN switches can be used to step through the snapshots.

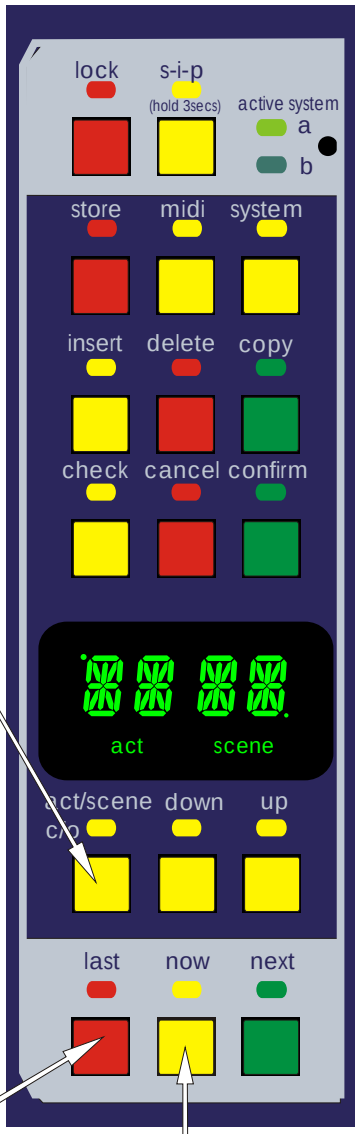
CONFIRM and CANCEL are used to enter or exit functions or sub menus.

Snapshots can be stored in the automation system as ACTs or SCENEs. There is no difference between an ACT or a SCENE apart from the numbering; scenes are just sub sets within acts.

The ACT/SCENE C/O switch is used to select the acts or scenes in conjunction with the UP/DOWN switches. An appropriate indication, "ACT" or "SCENE", will be illuminated to indicate this status.

The LAST, NOW and NEXT switches recall snapshots to the console surface.

LAST recalls the snap shot numerically preceding the snap shot that is currently recalled/stored.



The UP/DOWN switches allow the operator to scroll through act/scene numbers and navigate through menus.

NEXT recalls the snapshot numerically proceeding the snapshot that is currently recalled/stored.

NOW recalls the snap shot that is currently indicated on the numeric display.

Monitor Section

The SIS switch routes solo signals to the mono and stereo local monitor outputs with full left, centre, right imaging. This overrides any signals sent from other sources when ever a solo is active on the console.

The MONO SOLO TRIM adjusts the incoming solo level before sending it to the monitor output. The control range is from +6dB to off with a centre detented 0dB calibration point.

The mono SOLO switch routes solo signals to the mono local monitor output when ever a solo is active on the console. This overrides any signals sent from the mono master.

The MONO master switch routes the post fader mono master mix to the mono local monitor output.

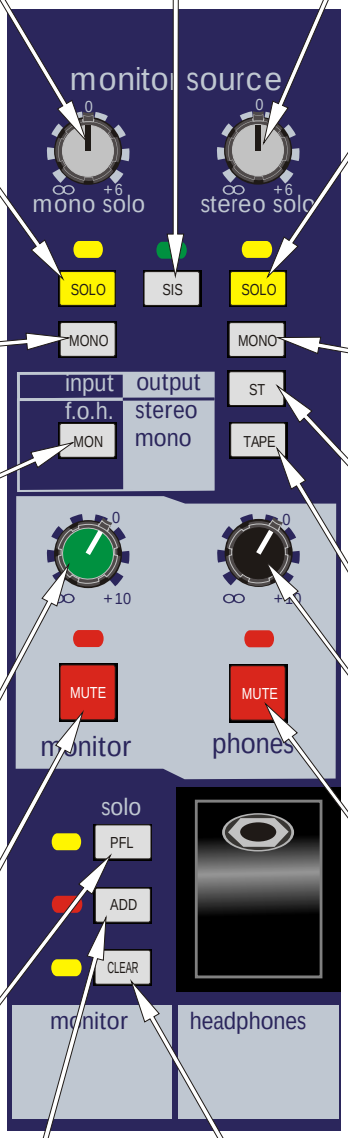
On input channels and stereo returns the MON switch changes the monitor signals to be derived from the monitor signal paths where appropriate. Front of house signals are monitored as a default. On outputs the MON changes solos from stereo pairs to mono.

The LOCAL MONITOR level control gives continuous adjustment of all three local monitor output levels from + 10dB to off.

The local monitor MUTE switch mutes the local monitor outputs.

The SOLO PFL switch sends the mono PFL solo bus signals to the headphones and local monitor outputs in place of the AFL signals. This also changes the solo meters to monitor PFL solo bus signals.

The SOLO ADD MODE switch allows multiple channel access to the solo busses. When the solo add mode is off the action of pressing a solo switch will cancel any previously active solo. Multiple solos such as stereo left and right signals can be monitored in this mode of operation as long as the solo switches are pressed at approximately the same time. When the solo add mode is on the auto cancelling is defeated which allows multiple channel or output soloing.



The STEREO SOLO TRIM adjusts the incoming solo level before sending it to the monitor output. The control range is from +6dB to off with a centre detented 0dB calibration point.

The stereo SOLO switch routes solo signals to the stereo local monitor outputs when ever a solo is active on the console. This overrides any signals sent from the mono master, stereo master or tape input.

The MONO master switch routes the post fader mono master mix to the stereo local monitor outputs.

The ST master switch routes the post fader stereo master mix to the stereo local monitor outputs.

The TAPE switch routes the stereo tape input to the stereo local monitor outputs.

The PHONES level control gives continuous adjustment of the headphone level from + 10dB to off.

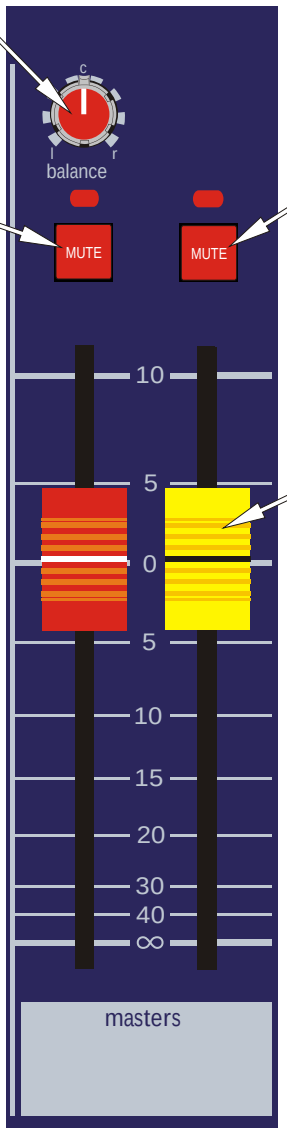
The phones MUTE switch mutes the headphone outputs.

The CLEAR switch is used to clear any active solos on the console.

Master Section

The BALANCE control provides a bus trim for the left and right master signal paths (prior to the insert point).

The stereo master MUTE switches cut the post fader output signals but CAN NOT be used as part of the console snapshot system.



The mono master MUTE switch cuts the post fader output signal fader but CAN NOT be used as part of the console snapshot system.

The two master FADERS control the output levels of the main mix from +10dB to off.

Automation System Control

Legend Automation System Overview

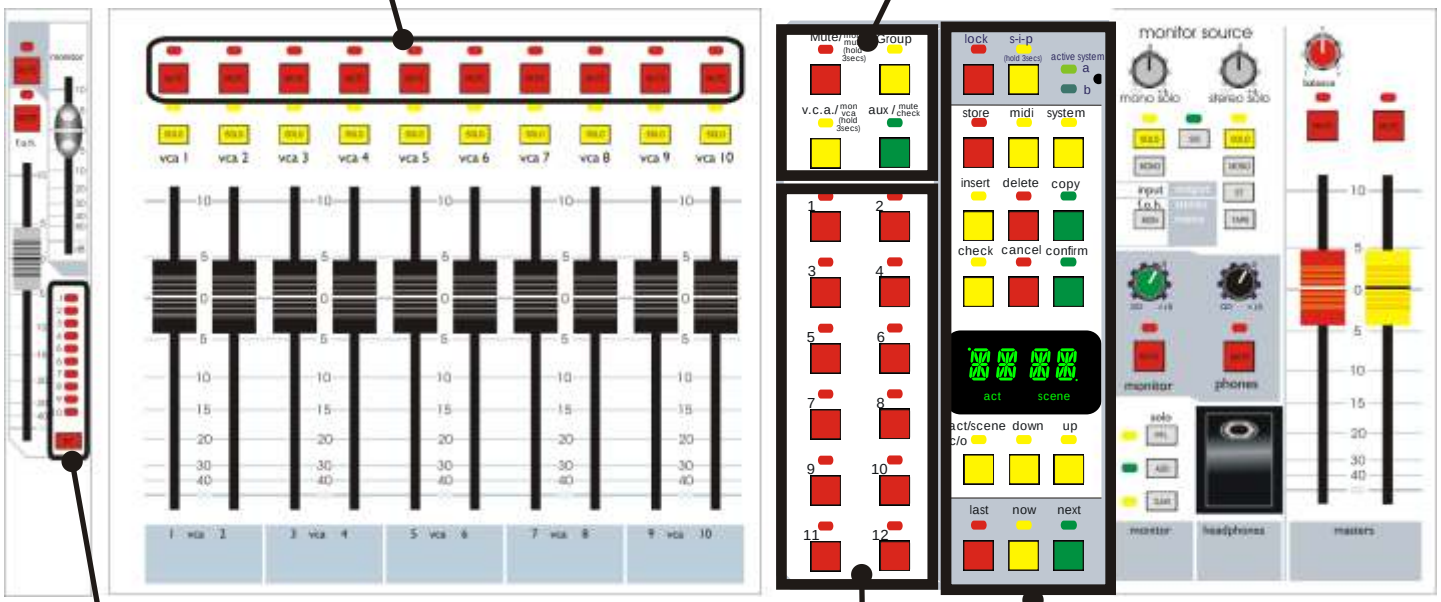
The Legend Automation System allows the storage of the following function settings scene by scene:

- FOH Master VCA Assignment
- Monitor Master VCA Assignment
- Input Automute Assignment
- I/P Channel Mute Assignment
- Aux Return Mute Assignment
- FOH Output Mute Assignment
- Group Output Mute Assignment
- Matrix Output Mute assignment
- Master VCA Mute Assignment
- 4 Midi Out Messages per Scene
- Midi Message the scene will be recalled

System Layout

The Mute switches may either be selected as Automute Masters or Master VCA Mutes. These may be selected in the SYSTEM menu. As default consoles are set to Master VCA Mute.

This section controls the function being assigned to the Input modules and Auxiliary Returns when the SET switch is pressed.



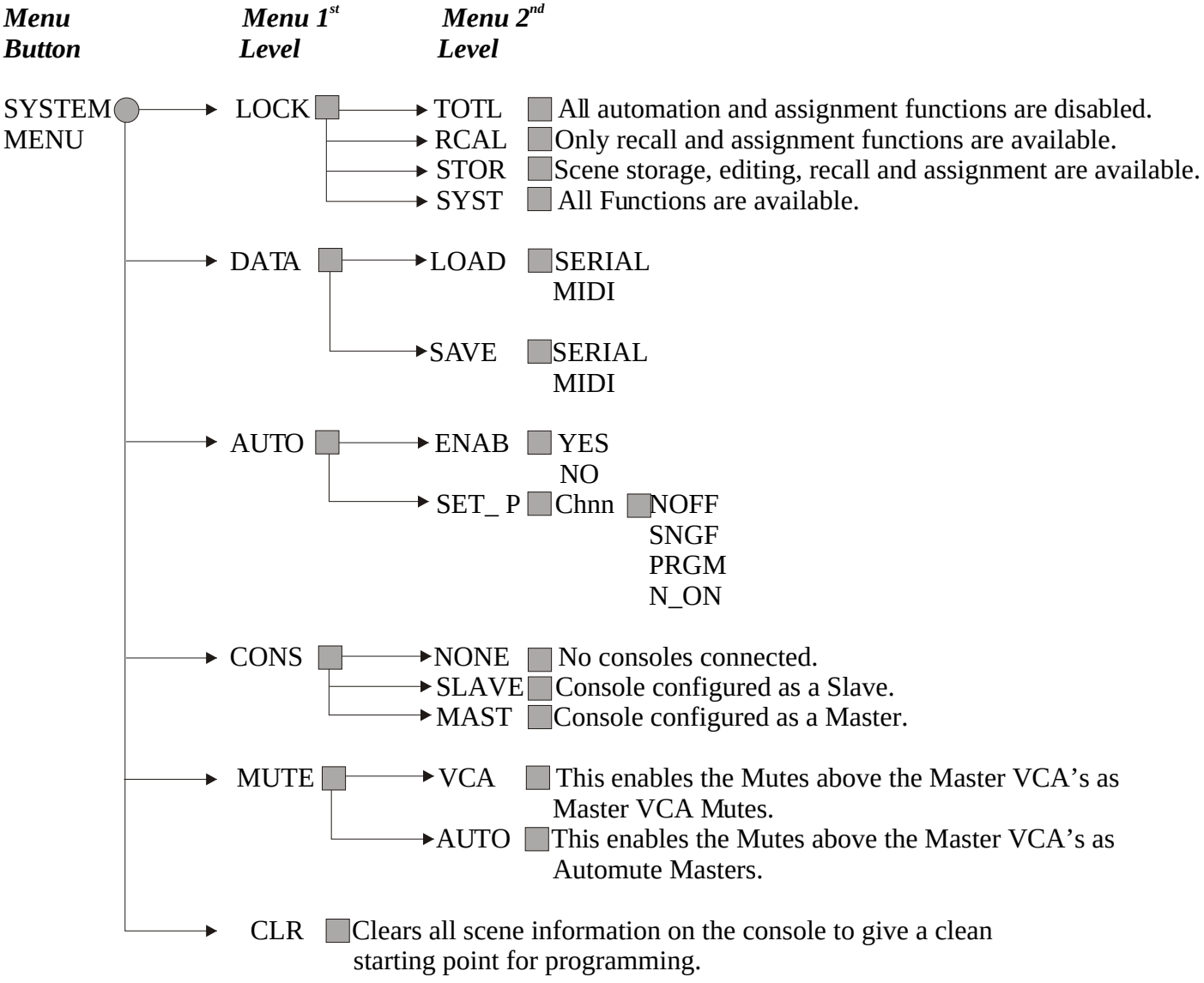
The LEDs indicate which Automutes or VCAs are assigned to this channel. The SET switch will either toggle the selection already assigned to the module with that displayed on the Master selection switchbank or overwrite the setting on the channel if pressed and held.

This section contains the controls for navigating through the Automation menus.

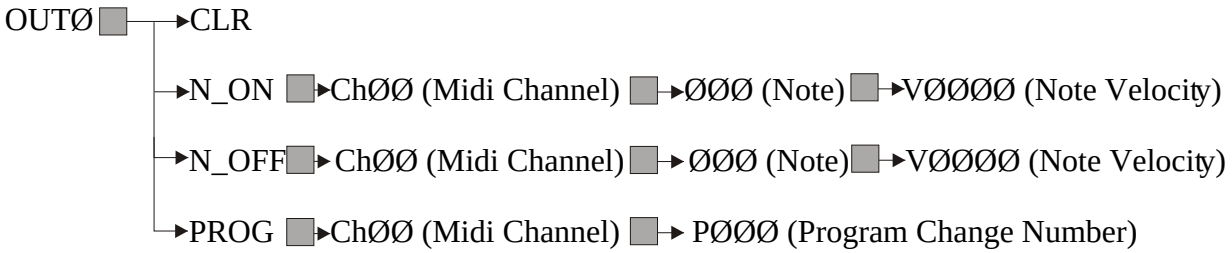
This Master selection switchbank allows the user to select which Automute / Master VCAs the inputs and outputs are assigned to.

Legend Menu Overview Ver 2.00

Key ■ *This symbol denotes a CONFIRM button press*
● *This symbol denotes a SYSTEM button press*
◆ *This symbol denotes a MIDI button press*



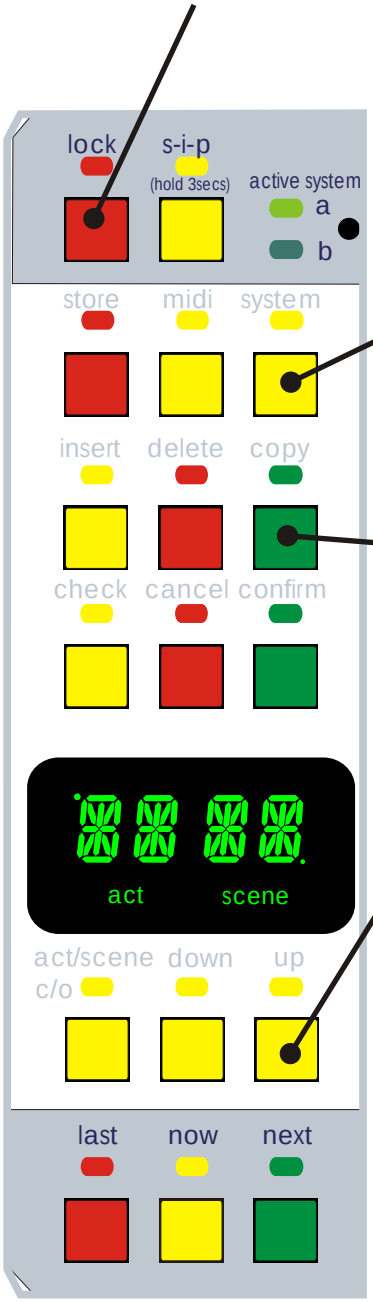
MIDI Out Sub Menus:
(Ø denotes a number)



Selecting the Different Lock States of the Console

To Lock Assignments

1 The LOCK switch toggles state each time it is pressed. When the LOCK switch is illuminated all assignment changes are disabled. The console will automatically revert to a locked state if no assignment controls are operated within a 90 second period. To start assigning controls disable this button.



System Locks

2 Press the SYSTEM Button and LOCK will be displayed in the Window.

3 Press the CONFIRM switch and the LOCK sub menu will be displayed in the window.

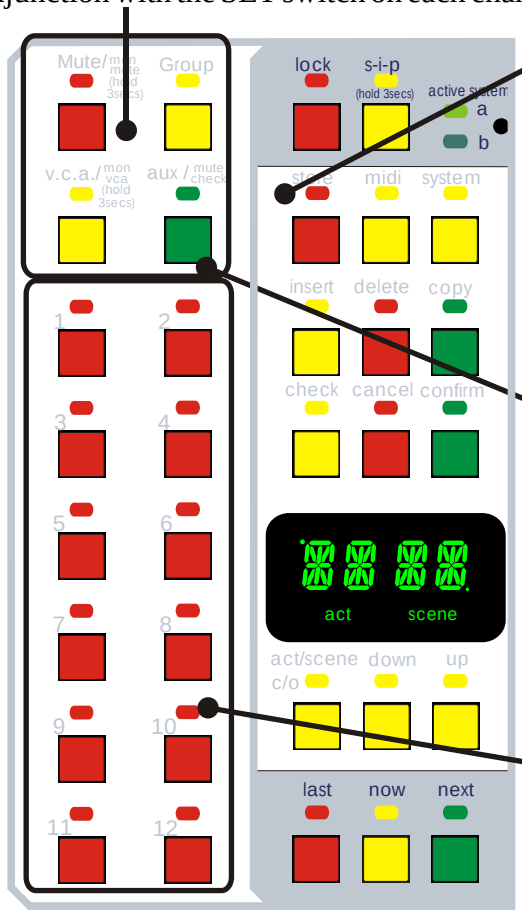
4 Using the UP/DOWN switches scroll through the LOCK sub menu until the desired lock mode is displayed.

Refere to the Menu overview for lock modes and descriptions.

5 Press the CONFIRM switch and the console will be set to the chosen lock mode.

Assigning Functions

1 The ASSIGN KEYS are used to change settings between INPUT VCA FOH (VCA MON if held for 3s), MUTE FOH (MUTE MON if held for 3s) , AUDIO GROUP or AUX assignment in conjunction with the SET switch on each channel.



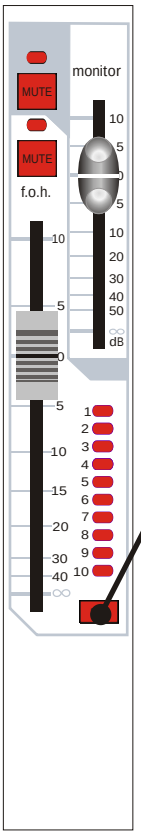
2 To un-lock the assignment function first press the LOCK switch so that the LED is off.

3 The VCA FOH ,MUTE FOH, GROUP and AUX switches set the assignment mode for the input modules. As default these switches interlock so that only one mode can be viewed at a time, however if they are pressed down for more than 0.5 second the interlock is removed. This is used for the "clear mode" (see below).

To access VCA and MUTE assignment to the MON signal path press and hold either the FOH VCA or MON buttons for 3 seconds. Instead of being constantly on the indicator LED will flash to show that the MON path assignment has now been selected.

4 Press the switches to assign the setup required. A long press will allow multiple assignment of more than one VCA/Aux/Group or Mute. A short press will clear the previous settings.

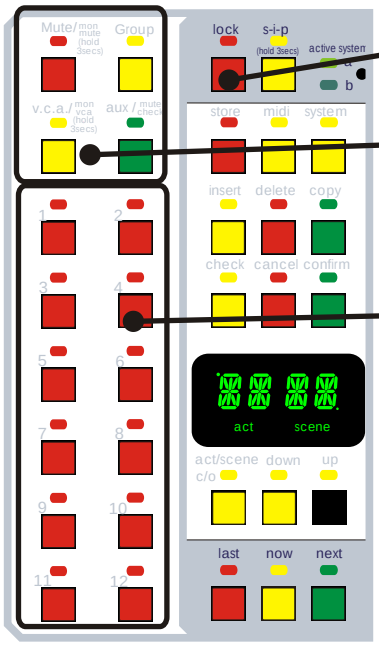
In this mode (with all LED's off), operating an input SET switch with a long press will clear all assignments. The mode switches can be used to select which parts are cleared, i.e. press VCA mode to clear VCAs, press GROUP mode to clear routing, or use a long press to activate more modes for simultaneous clearing.



5 Press the SET switch on the input channels for which the assignments are required. The SET switch works in two different ways. A long press will replace all previous settings with the new assignments selected on the assignment section. A short press will toggle between the original and the new assignments. If the function is assigned on both the input and the assignment section pressing the SET button will switch that function on and off.

6 To enter CLEAR mode set all the assign keys to off. To do this simply press the ones that are illuminated which then will toggle them off. Then press the SET keys on the channel that need no assignment.

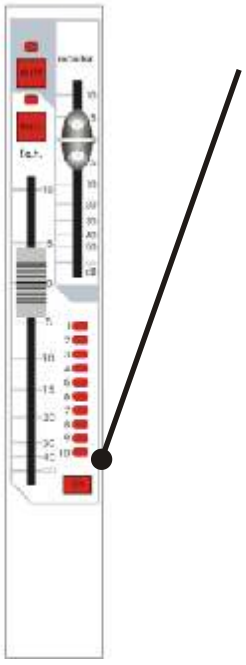
Assigning VCA's To The FOH Signal Path



2 To enter ASSIGNMENT mode first press the LOCK switch (to un-lock the assignment system). So that the LED is off.

3 To assign a VCA to the FOH signal path you must first press the VCA button so that its LED is illuminated. This indicates that the 10 LED's on the input channel now indicate assignment of VCA's to the FOH signal path.

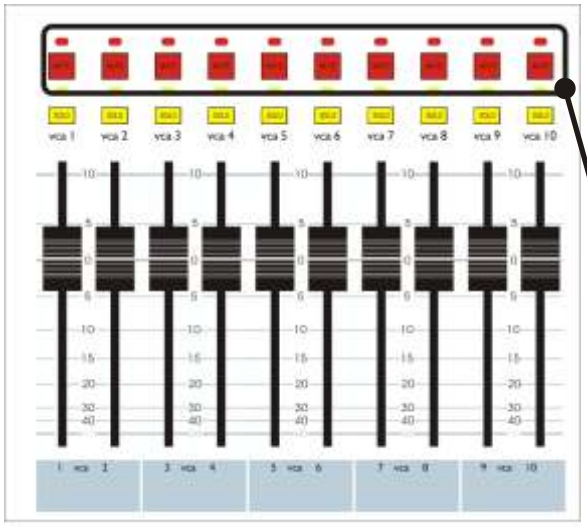
4 Enable the switches to assign the set up required. A long press will allow multiple assignments and a short press will clear the previous assignments.



5 Press the SET switch on the input channels for which the assignments are required. The SET switch works in two different ways. A long press will replace all previous settings with the new assignments, a short press will toggle between the original and the new assignments.

6 To enter CLEAR mode set all the assign keys to off. To do this simply press the ones that are illuminated which will then toggle them off. Then press the SET keys on the channel that need no assignment.

Assigning Automutes To The FOH Signal Path

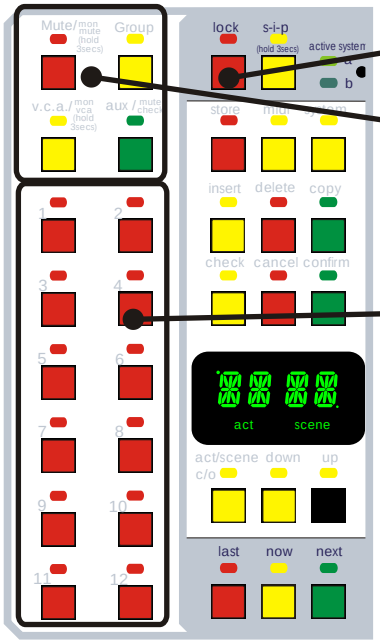


1 To use Automutes on the FOH or Monitor signal path, you must first select AUTO as the MUTE type in the SYSTEM Menu:

Press SYSTEM and using the UP/DOWN buttons scroll to MUTE, press CONFIRM

Using the UP/DOWN switches select AUTO on the display and press CONFIRM.

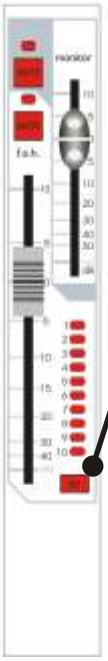
The Mute switches above the Master VCAs are now configured as Automute masters.



2 To enter ASSIGNMENT mode first press the LOCK switch (to un-lock the assignment system). So that the LED is off.

3 To assign Automutes to the FOH signal path you must first press the MUTE button so it is illuminated. This indicates that the 10 LED's on the input channel now indicate assignment of Automutes to the FOH signal path.

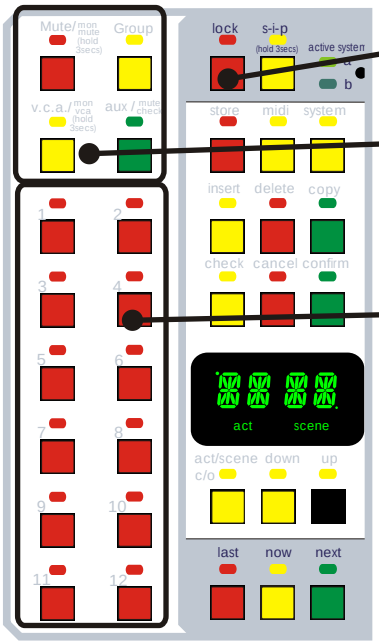
4 Enable the switches to assign the set up required. A long press will allow multiple assignments and a short press will clear the previous assignments.



5 Press the SET switch on the input channels for which the assignments are required. The SET switch works in two different ways. A long press will replace all previous settings with the new assignments, a short press will toggle between the original and the new assignments.

6 To enter CLEAR mode set all the assign keys to off. To do this simply press the ones that are illuminated which will then toggle them off. Then press the SET keys on the channel that need no assignment.

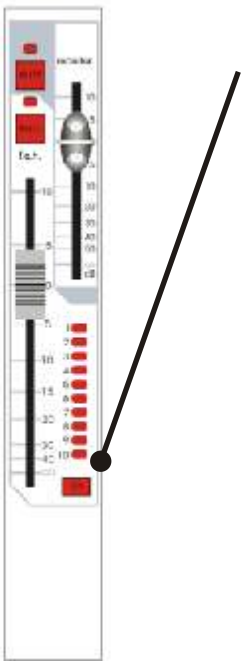
Assigning VCA's To The MON Signal Path



2 To enter ASSIGNMENT mode first press the LOCK switch (to un-lock the assignment system). So that the LED is off.

3 To assign a VCA to the MON signal path you must first press and hold the VCA button so that its LED is flashing. This indicates that the 10 LED's on the input channel now indicate assignment of VCA's to the Monitor signal path.

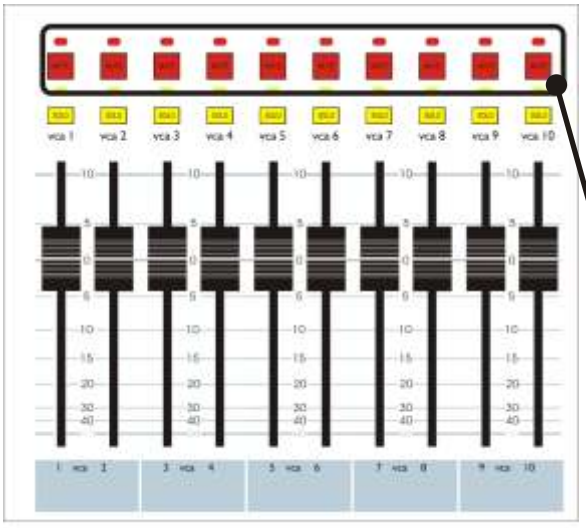
4 Enable the switches to assign the set up required. A long press will allow multiple assignments and a short press will clear the previous assignments.



5 Press the SET switch on the input channels for which the assignments are required. The SET switch works in two different ways. A long press will replace all previous settings with the new assignments, a short press will toggle between the original and the new assignments.

6 To enter CLEAR mode set all the assign keys to off. To do this simply press the ones that are illuminated which will then toggle them off. Then press the SET keys on the channel that need no assignment.

Assigning Automutes To The Monitor Path

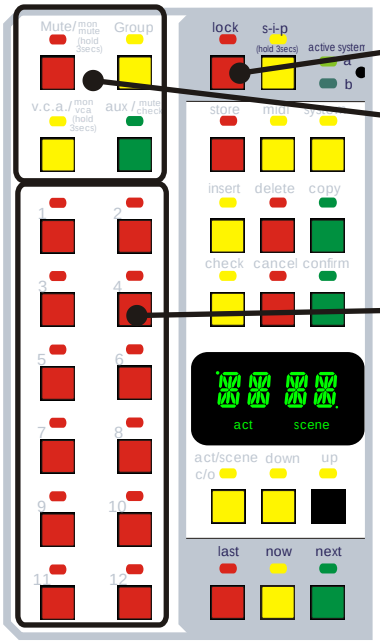


1 To use Automutes on the FOH or Monitor signal path, you must first select AUTO as the MUTE type in the SYSTEM Menu:

Press SYSTEM and using the UP/DOWN buttons scroll to MUTE, press CONFIRM

Using the UP/DOWN switches select AUTO on the display and press CONFIRM.

The Mute switches above the Master VCAs are now Automute masters.



2 To enter the ASSIGNMENT mode, first press the LOCK switch (to un-lock the assignment system) so that the LED is off.

3 To assign Automutes to the MONITOR signal path you must first press and hold the MUTE button until the LED is flashing. This indicates that the 10 LEDs on the input channel now indicate assignment of MON Automutes to that channel.

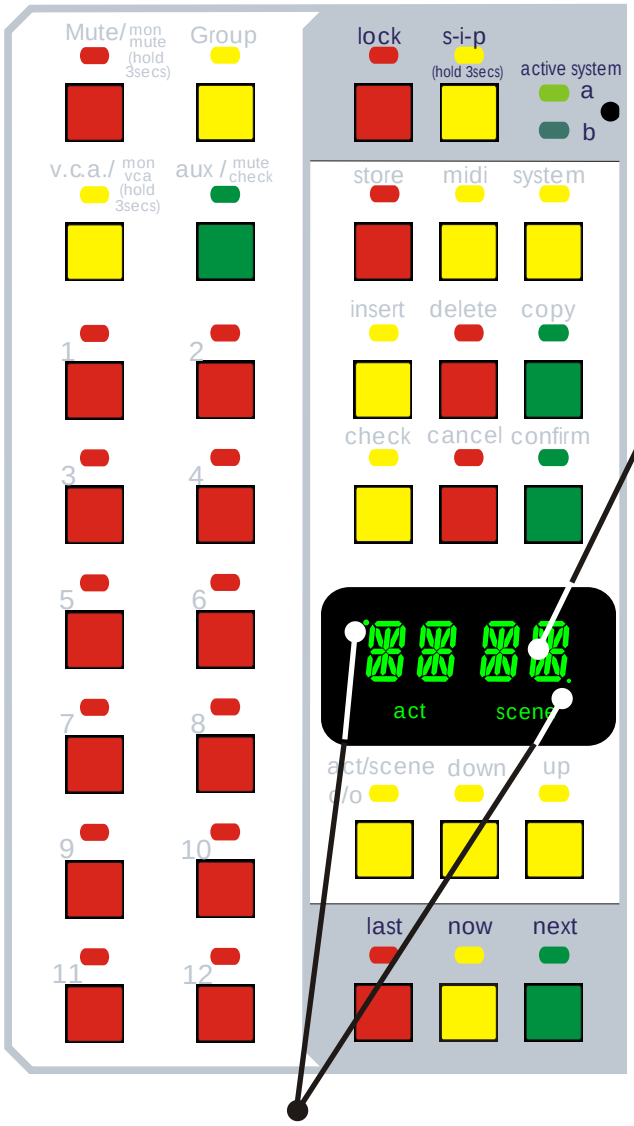
4 Enable the switches to assign the set up required. A long press will allow multiple assignments and a short press will clear the previous assignments.

5 Press the SET switch on the input channels for which the assignments are required. The SET switch works in two different ways. A long press will replace all previous settings with the new assignments, a short press will toggle between the original and the new assignments.

6 To enter CLEAR mode set all the assign keys to off. To do this simply press the ones that are illuminated which will then toggle them off. Then press the SET keys on the channel that need no assignment.

Scene Storage

Once the console operational surface has been set up, you will now be ready to store the scene into the Automation System. To do this follow these steps:



The 2 dots in the top left and bottom right of the display indicate the following:

Top Left - Indicates that the scene number displayed is the scene currently active on the work surface of the console.

Bottom Right- Indicates that there is a valid scene stored at this location. It is only the valid scene on the work surface of the console if both of the dots are illuminated.

1 Ensure that the console is Unlocked into wither SYST or STOR.

2 Using the Up/Down swithces select the Act/Scene number where you wish to store the scene.

Note:

When scene is lit the UP/DOWN buttons will scroll through 0000 to 9999.

If you wish to access numbers faster you can swap between scrolling through the first 2 digits and the last 2 digits by alternating between lighting the Act and the Scene lights. This is done by pressing the Act/Scene button

3 Once the desired scene number is displayed, press the STORE switch. If this is a new scene, it will be stored and the display will default back to the scene number plus one.

If this scene already exists the display will flash alternately between OVR /STR. You may over store this scene by pressing the CONFIRM button.

By pressing the UP/DOWN button when OVR/STR is flashing, you also have the option to change the Midi information which the scene will respond to (when the Midi IN port of the console is enabled). For more information on this see Midi Notes.

Recalling Scenes:
There are 3 methods by which scenes can be recalled:

1/ Stepping through existing scenes using the LAST and NEXT switches.
This steps through the scenes in numerical order.

2/ Select the Act/Scene number using the ACT/SCENE, UP and DOWN switches.
When the correct scene number is displayed, press the NOW switch and the scene will be recalled.

Inserting Scenes:

1/ Once you have created the scene you wish to insert, change the Act/Scene number using the ACT/SCENE, UP and DOWN buttons until it displays the desired scene number.

2/ Press the INSERT switch. The screen will then display DONE.
The original scene and any scene following it will then be incremented by one position.

Note: The INSERT button will only be illuminated if a scene exists where you wish to place the new scene, otherwise STORE may be used as normal.

Copying Scenes:

1/ Recall the scene you wish to copy by selecting the scene number and pressing the NOW button.

2/ Press the COPY switch. The Act/Scene numbers can now be scrolled through using the ACT/SCENE UP and DOWN switch. Once the desired position is reached the scene is copied to that position by pressing the CONFIRM switch.

Previewing a Scene:
To preview a scene without effecting your mix use the following method:

1/ Select the scene number on the display using the ACT/SCENE UP and DOWN switches.

2/ Once the desired scene is displayed, the automated switch configuration stored for that scene can be viewed by pressing the CHECK switch. This does not affect the present setting on the desk. The screen will also display Legend configuration and Midi data.

3/ Pressing the CHECK switch again will drop you back into normal mode.

Deleting a Scene:
Recall the scene you wish to delete, or dial up the scene number on the display using the ACT/SCENE UP and DOWN switch. Press the DELETE switch, and you will then be asked to confirm this. Press the CONFIRM switch the screen will then display DONE when the scene is deleted.

Clearing The Console Memory:
To clear the memory in the console use the following steps:

1/ Press the SYSTEM menu and scroll to CLR, press CONFIRM
2/ The screen will read SURE, press CONFIRM.
3/ The screen will read WAIT and then DONE.

The memory in the console will now be cleared, the automated settings on the work surface will remain untouched until the NOW button is pressed, which will recall the default settings of scene 0000.

Editing Midi Output Message:

1/ Pressing the MIDI switch places you in the MIDI menu.

2/ Using the UP and DOWN switches scroll through OUT01 to 04 until the required message is reached. (On the Legend there are a maximum of 4 MIDI out messages that can be sent per recalled scene). Press CONFIRM.

3/ Using the UP and DOWN switches scroll through the menu until the screen reads the MIDI Out protocol you wish to send and press the CONFIRM switches.

4/ The window will read CH00. Using the UP and DOWN keys choose the MIDI out channel you wish to send the message on, between 01 to 16 can be selected. Press CONFIRM.

5/ If you have selected Program Changes the window will display P000. Using the UP and DOWN switches, a program change between 00 and 127 may be selected. Press CONFIRM and you will be dropped back to the first level of the menu.

If you have selected a NOTE ON/OFF message C-2 will be displayed. Using the UP and DOWN switches until the desired Note is displayed and press CONFIRM. The display will then show V000. Select the required Velocity. Press CONFIRM and you will be dropped back to the first level of the menu.

6/ When the desired messages have been edited press the MIDI switch again to drop out of the menu.

7/ To then store the MIDI information with the Scene, the STORE switch must be pressed followed by CONFIRM.

Setting The Console To Respond To MIDI Changes:
The console may be programmed to recall scenes when receiving either MIDI Program Changes, Note On or Note Off messages. The protocol you wish console to respond to may be selected using the following method:

Note : To access this menu you must be in 'SYS' Lock Mode.

Enabling The Console To Respond To MIDI:

1/ Press the SYSTEM menu switches and scroll down to AUTO, press CONFIRM.

2/ Scroll to ENAB -(ENABle). This is the master switch for this function and can be set to "YES" or "NO". This must be set to YES if you wish the console to respond to MIDI Messages. Toggling this to NO will not delete the MIDI IN parameters already programmed into scenes but the console will not respond to MIDI.

Selecting The MIDI Protocol You Wish The Console To Respond To:

1/ Press the SYSTEM menu switches and scroll down to AUTO, press CONFIRM.

2/ Scroll to SETP - (SETuP). This is where the MIDI parameters that are used for this function on set. These parameters define the midi command that the console will respond to, and decode the required Act/Scene number. The four parameters that can be set are as follows:

N ON - (Note ON)
NOFF - (Note OFF)
SNGP - (SoNG Pointer)
PRCH - (PRogram CHange)

Choose the required protocol and press CONFIRM.

3/ The display will then show Ch01, select the MIDI channel you require the console to respond to (Between Ch01 and Ch16). Select the required Channel and press CONFIRM. You will be dropped out of the menu and the console will now be ready to respond to MIDI messages. As default, scenes are not set with MIDI information and must be programmed individually.

NOTE:

To respond to an external MIDI request to change the Act/Scene number, the following conditions must be true:

a. The "AUTO - ENAB" menu setting must be set to "YES" and the relevant Protocol chosen.
b. The console must not be in "TOTL" (TOTaL) Lock-Mode.
c. The console must not be performing any menu operations.
d. The Scenes must be programmed with the MIDI message to respond to.

Programming A Scene To Respond To A Specific MIDI Message:
To program a scene to respond to a MIDI message the following steps must be followed:

1/ Recall the scene you wish to program to respond to the MIDI message.

2/ Press the STORE switches. The screen will flash OVR/STR, using the UP and DOWN switches scroll to the MIDI protocol chosen in the system menu, either PRCH, N_ON, NOFF or SNGP and press CONFIRM.

3/ Depending on the protocol chosen you will either be required to choose:

a: Program Number
b: Note On followed by a Velocity
c: Note Off followed by a Velocity
d: Song Pointer Number corresponding to the scene number

NOTE ON / OFF Construction Encoding The Act And Scene Numbers:
The required MIDI command data can be constructed by setting the midi command parameters as follows:

Note ON/OFF : These MIDI commands have two parameters, as follows:

1. NOTE, this parameter is equivalent to the required “ACT” number. Each note has a numerical equivalent (see table below)

2. Velocity, this parameter is equivalent to the required “SCENE” number.
Example: To program a change to ACT 20, SCENE 44, - Set the note to G#-1, set velocity to 44.

3/ Song Pointer - The command is a numerical value and is equivalent to the combined “ACT” & “SCENE” number.

Example: To programme a change to ACT 45, SCENE 02, - set the value to 4502

MIDI “NOTE” to numerical value lookup table

	OCTAVE										
NOTE	-2	-1	0	1	2	3	4	5	6	7	8
c	0	12	24	36	48	60	72	84	96	108	120
c#	1	13	25	37	49	61	73	85	97	109	121
d	2	14	26	38	50	62	74	86	98	110	122
d#	3	15	27	39	51	63	75	87	99	111	123
e	4	16	28	40	52	64	76	88	00	112	124
f	5	17	29	41	53	65	77	89	01	113	125
f#	6	18	30	42	54	66	78	90	02	114	126
g	7	19	31	43	55	67	79	91	02	115	127
g#	8	20	32	44	56	68	80	92	03	116	-
a	9	21	33	45	57	69	81	93	04	117	-
a#	10	22	34	46	58	70	82	94	05	118	-
b	11	23	35	47	59	71	83	95	06	119	-

Console Memory Storage to Another Media.
The internal console memory can be stored either by a MIDI SYSEX dump or RS-232 down load to the Klark Teknik Utilities program Lsutils (this will require a Null Modem Cable).

MIDI Sysex Dumps:
To store and recall the memory of a console to and from a MIDI device (such as an MDF3 MIDI Filer) or the windows software application available from Midas .

1/ Select the SYSTEM menu, using the UP and DOWN switches select DATA and press CONFIRM.

2/ Using the UP/DOWN keys select either SAVE or LOAD and press CONFIRM.

3/ There are 2 ways of communication either MIDI (through the MIDI port in the rear of the console or via RS-232). Select either MIDI or SERIAL using the UP and DOWN switches and press CONFIRM. The display will then indicate the function being carried out and notify the user when finished.

Saving The Memory From The L3000 To A File:

1/ Connect the null modem cable.

2/ On the computer select the SHOW menu and click on 'Download From Console'. A window will open and set up the Comm Port. The message **WAITING FOR SHOW** data will then be displayed.

3/ Select the 'SYSTEM' menu on the L3000 and scroll to 'DATA'. Press 'CONFIRM', then scroll to 'SAVE' and press 'CONFIRM'. Now scroll to 'RS232' and press 'CONFIRM'.The show memory from the L3000 will then be down loaded into the computer. When the data transfer is complete, the L3000 will ask you to confirm the STORE, press CONFIRM.

4/ Select the Show menu in Hsutil and click on 'Save To File'.

5/ A prompt will appear asking for a show a name. Give the file type as *.shw.

6/ Click on OK and the file will be saved.

Down Loading A Show Into The L3000:

1/ Connect the null modem cable.

2/ On the computer select SHOW menu and click on 'Load From File'. Using the browse function select the show you wish to download into the console and click on OK. A window will open telling you the loading is complete, click on OK.

3/ Select the Show menu in Hsutil and click on 'Upload To Console'. A window will open asking you to hit upload when console is ready.

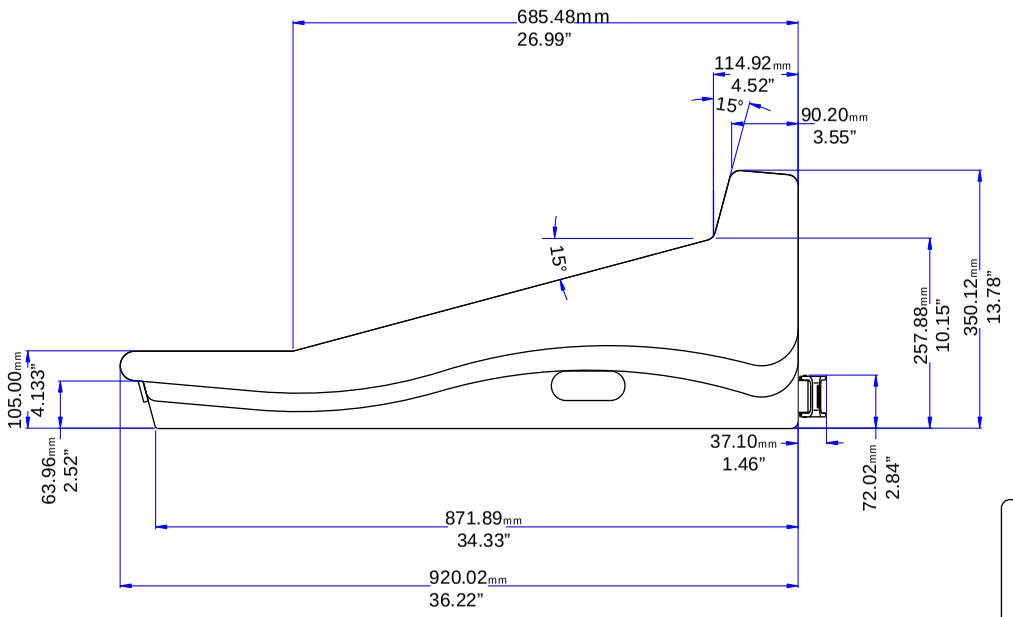
4/ Select the SYSTEM menu on the L3000, and scroll to 'DATA' then press 'CONFIRM'. Scroll to 'LOAD' and press 'CONFIRM'. Now scroll to RS-232 and press 'CONFIRM'.

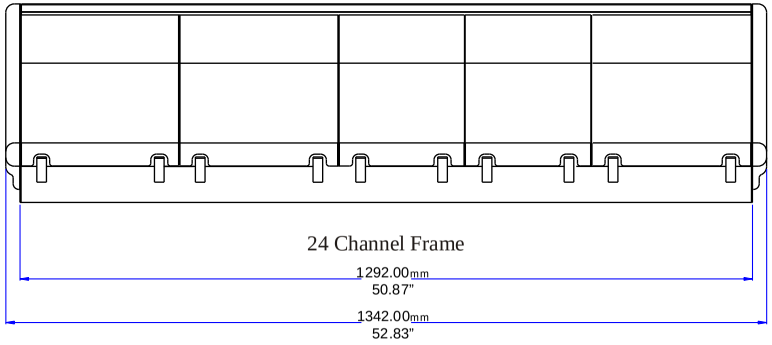
5/ Click on the 'Upload' button.

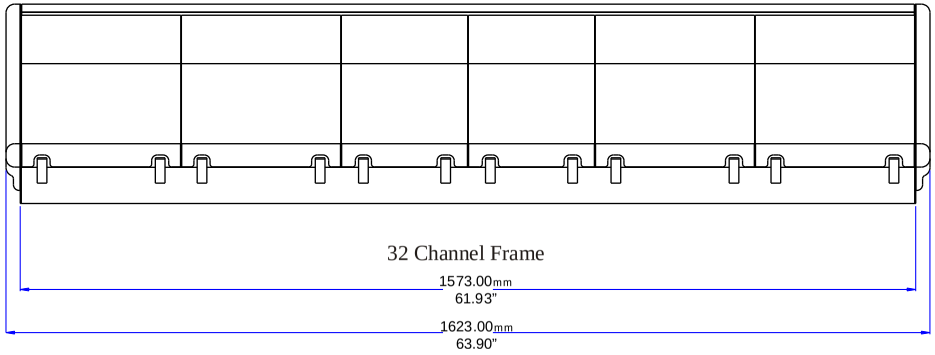
6/ When the file is uploaded successfully, the L3000 will prompt you to press CONFIRM. The show memory from the computer will now be loaded into the L3000.

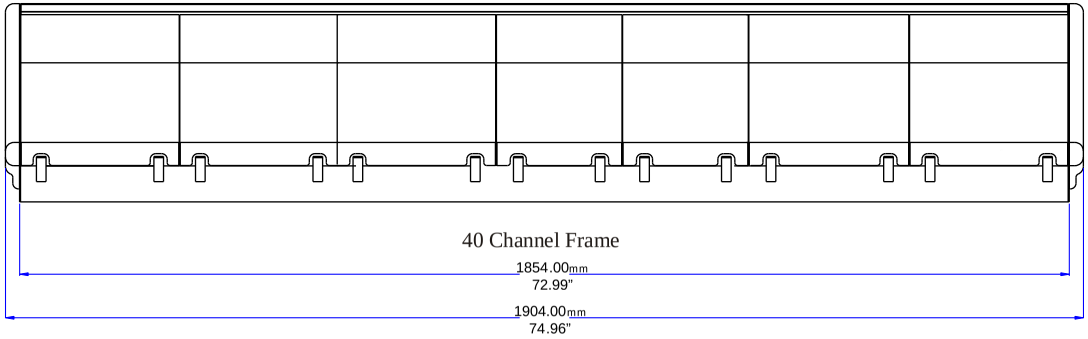
Frame sizes and Dimensions

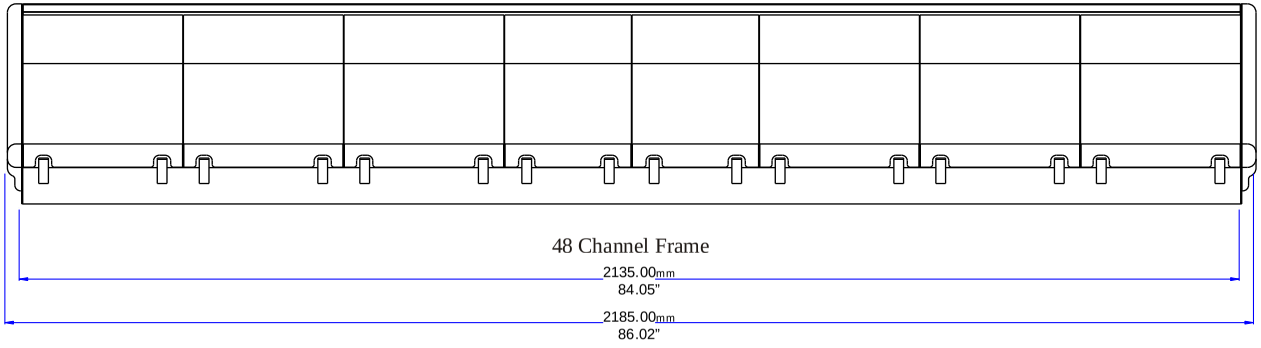
Legend 3000 Frame sizes and Dimensions











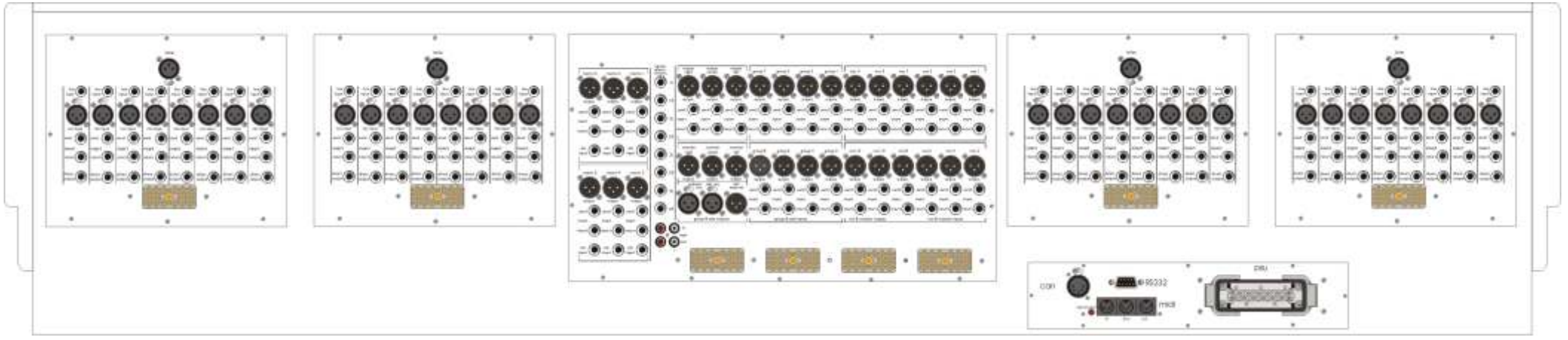
Weight *(out of flight case)*:

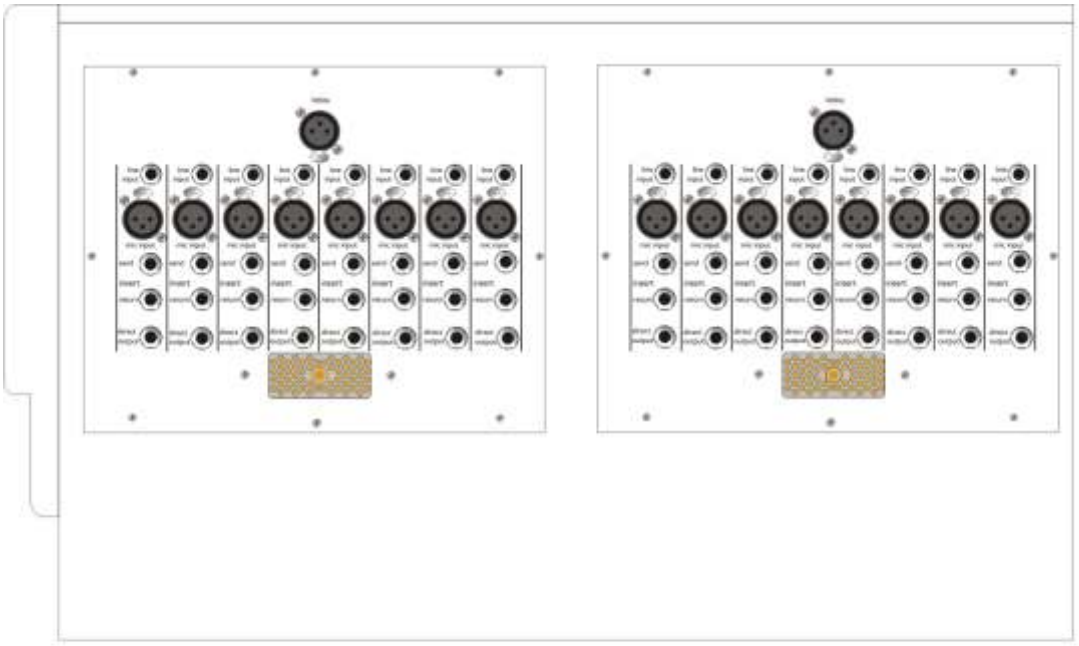
28 channel 24 mono / 4 stereo	71kg	156.5lbs
36 channel 32 mono / 4 stereo	85kg	187.4lbs
44 channel 40 mono / 4 stereo	100kg	220.5lbs
52 channel 48 mono /4 stereo	114kg	251.3lbs

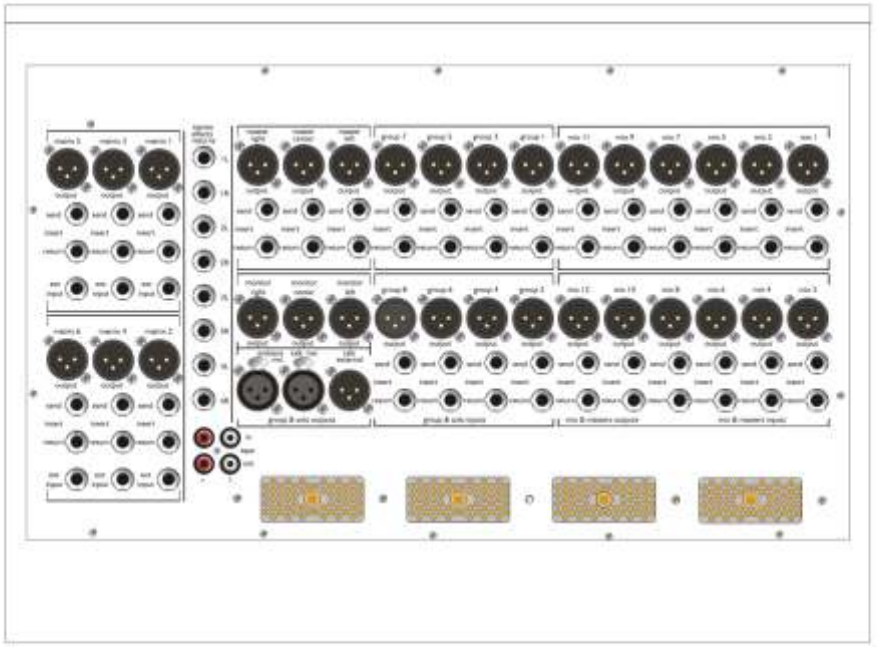
These weights are approximate

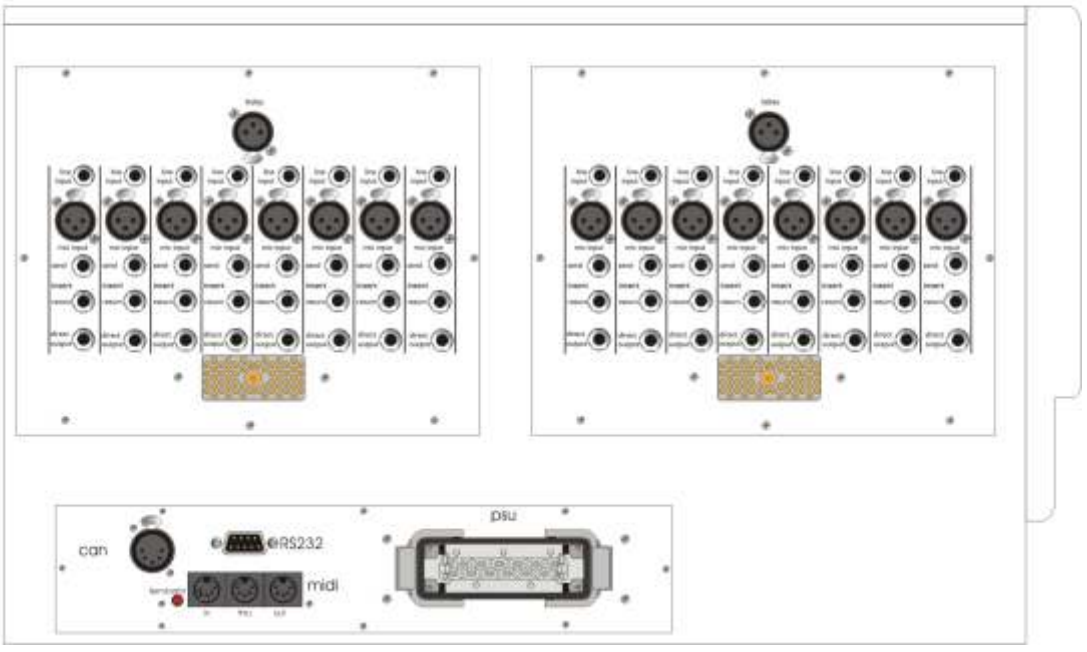
Rear Panel Configuration

Midas Legend 3000 Rear Panel
(32 mono channel)



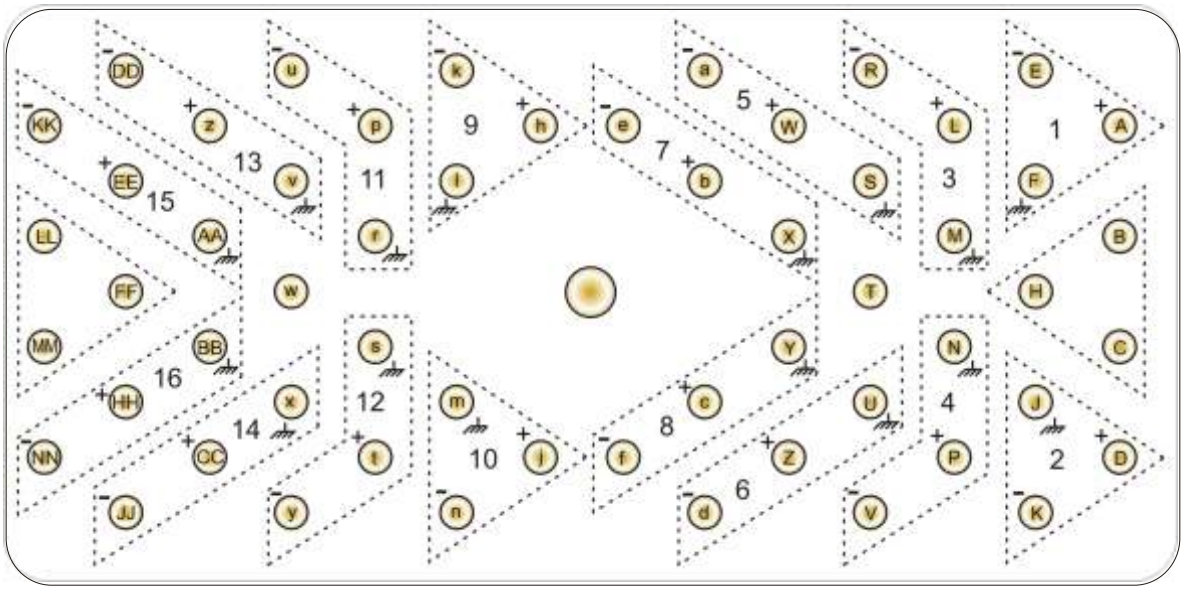





can
RS232
midi
psu

Edac Wiring Diagrams

56 Way Edac Connector Details



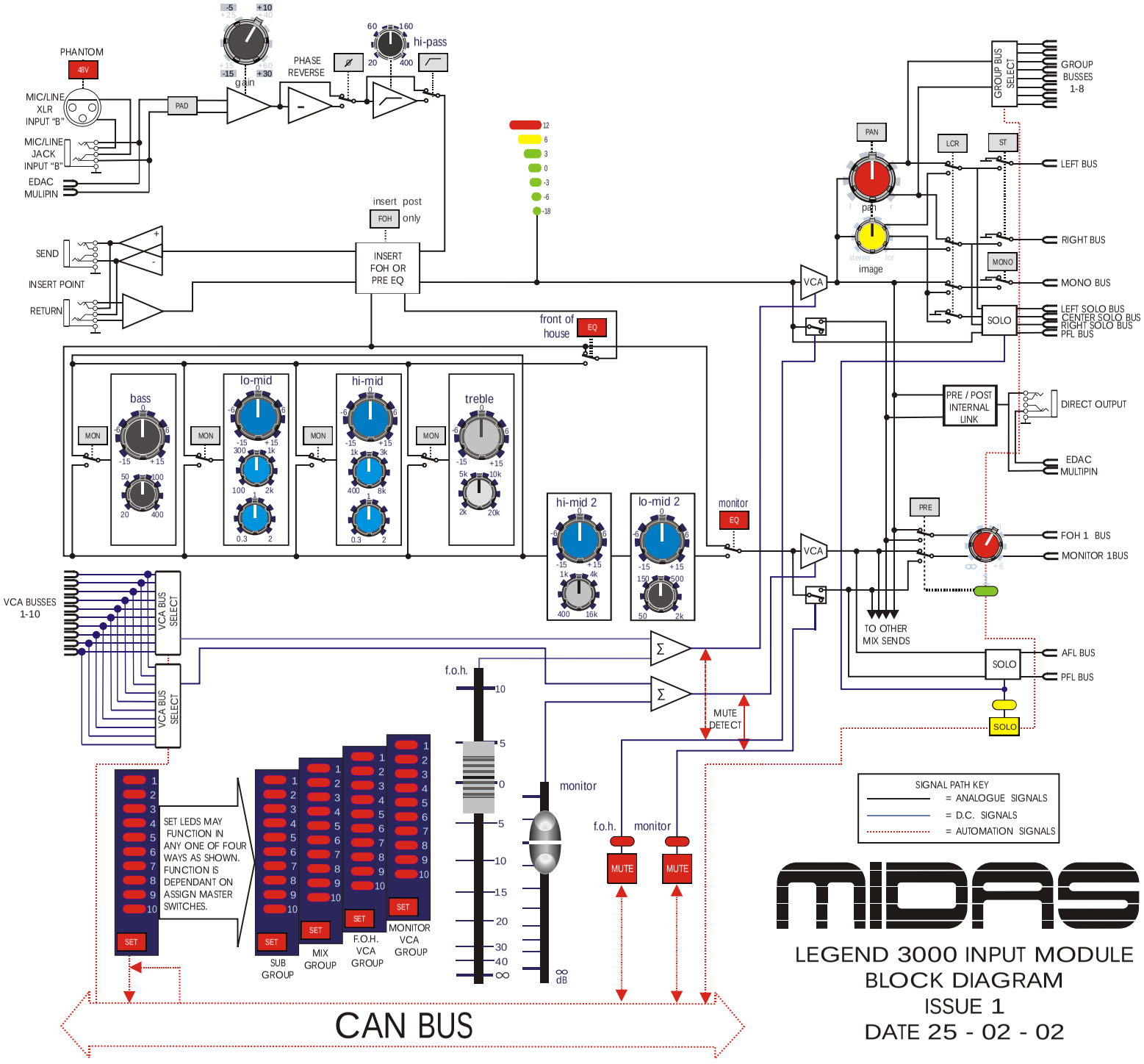
INPUTS
1 Mic In1
2 Mic In 2
3 Mic In 3
4 Mic In 4
5 Mic In 5
6 Mic In 6
7 Mic In 7
8 Mic In 8
9 Direct Out 1
10 Direct Out 2
11 Direct Out 3
12 Direct Out 4
13 Direct Out 5
14 Direct Out 6
15 Direct Out 7
16 Direct Out 8

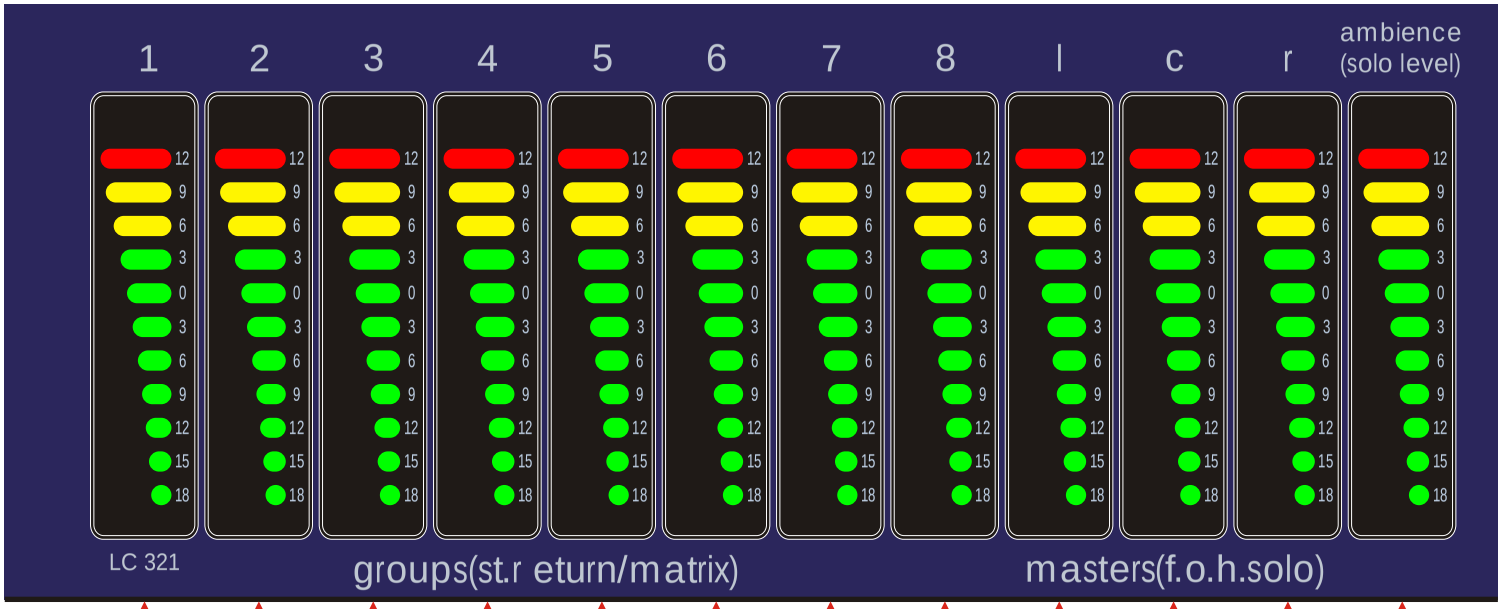
This wiring pattern is the same for all input edacs.

MIX & MASTERS
Mix Out & Mix Bus Injects
Master Out & Master Bus Injects
1 Mix 1
2 Mix 9
3 Mix 2
4 Mix 10
5 Mix 3
6 Mix 11
7 Mix 4
8 Mix 12
9 Mix 5
10 Master L
11 Mix 6
12 Master C
13 Mix 7
14 Master R
15 Mix 8
16 Chassis

GROUP & SOLO
Group Out & Group Bus Injects
Solo Out & Solo Bus Injects
1 Group 1
2 FOH L
3 Group 2
4 FOH C
5 Group 3
6 FOH R
7 Group 4
8 MON AFL
9 Group 5
10 FOH PFL
11 Group 6
12 MON PFL
13 Group 7
14 Chassis
15 Group 8
16 Chassis

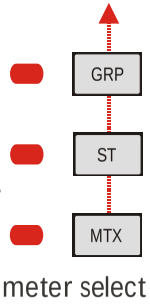
Block Diagrams


PHANTOM
48V
MIC/LINE XLR INPUT "B"
MIC/LINE JACK INPUT "B"
EDAC MULIPIN
PAD
gain
PHASE REVERSE
hi-pass
SEND
INSERT POINT
RETURN
insert post
FOH only
INSERT FOH OR PRE EQ
front of house
EQ
bass
lo-mid
hi-mid
treble
MON
hi-mid 2
lo-mid 2
monitor
EQ
VCA BUSSES 1-10
VCA BUS SELECT
VCA BUS SELECT
SET LEDS MAY FUNCTION IN ANY ONE OF FOUR WAYS AS SHOWN. FUNCTION IS DEPENDANT ON ASSIGN MASTER SWITCHES.
SET
SUB GROUP
MIX GROUP
F.O.H. VCA GROUP
MONITOR VCA GROUP
f.o.h.
monitor
MUTE DETECT
MUTE
MUTE
f.o.h.
monitor
CAN BUS
GROUP BUS SELECT
GROUP BUSSES 1-8
PAN
LCR
ST
LEFT BUS
RIGHT BUS
MONO
MONO BUS
SOLO
LEFT SOLO BUS
CENTER SOLO BUS
RIGHT SOLO BUS
PFL BUS
image
VCA
PRE / POST INTERNAL LINK
DIRECT OUTPUT
EDAC MULTIPIN
PRE
FOH 1 BUS
MONITOR 1BUS
TO OTHER MIX SENDS
SOLO
AFL BUS
PFL BUS
SOLO
SIGNAL PATH KEY
= ANALOGUE SIGNALS
= D.C. SIGNALS
= AUTOMATION SIGNALS
MIDAS
LEGEND 3000 INPUT MODULE
BLOCK DIAGRAM
ISSUE 1
DATE 25 - 02 - 02



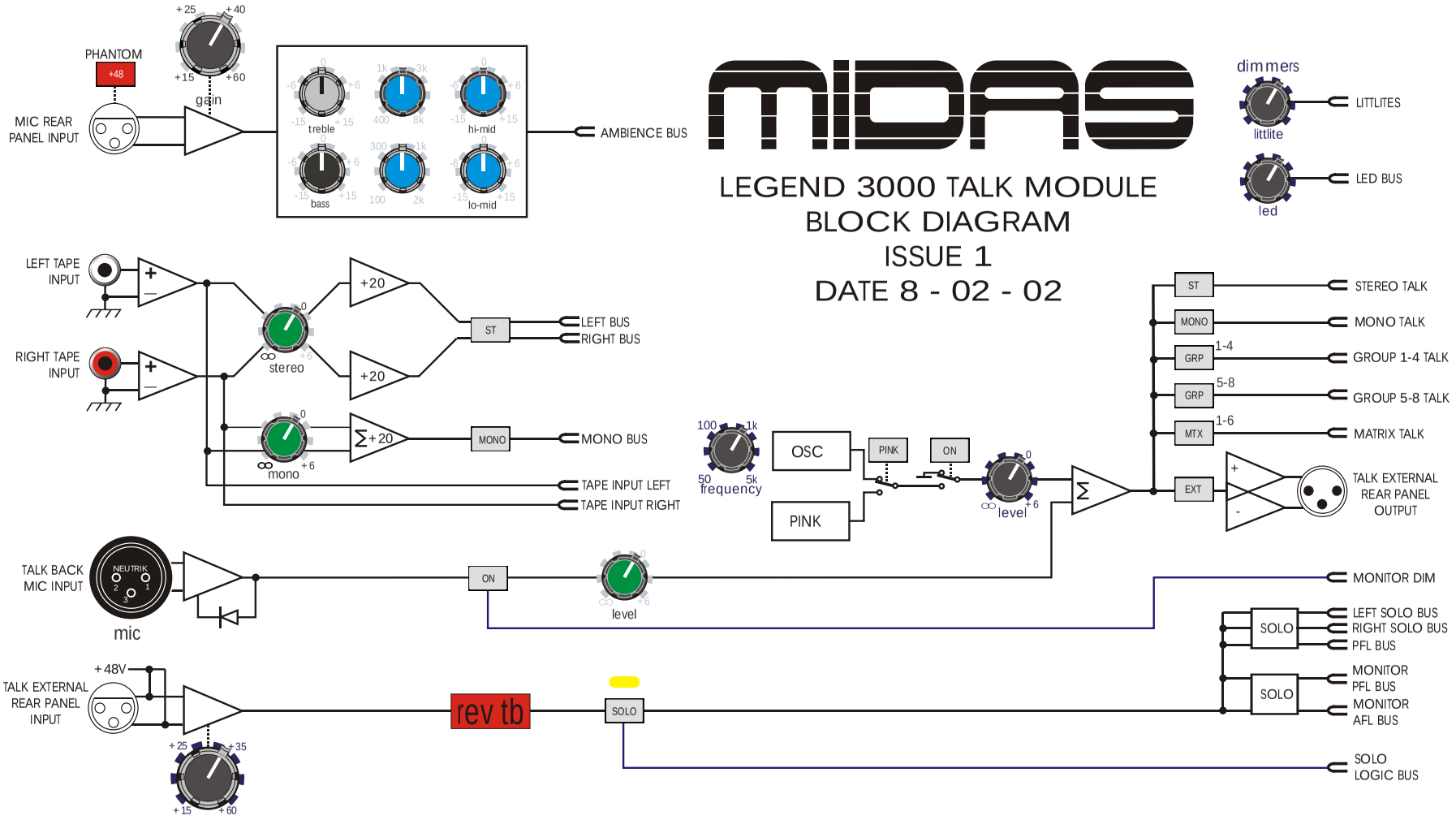
MIDAS

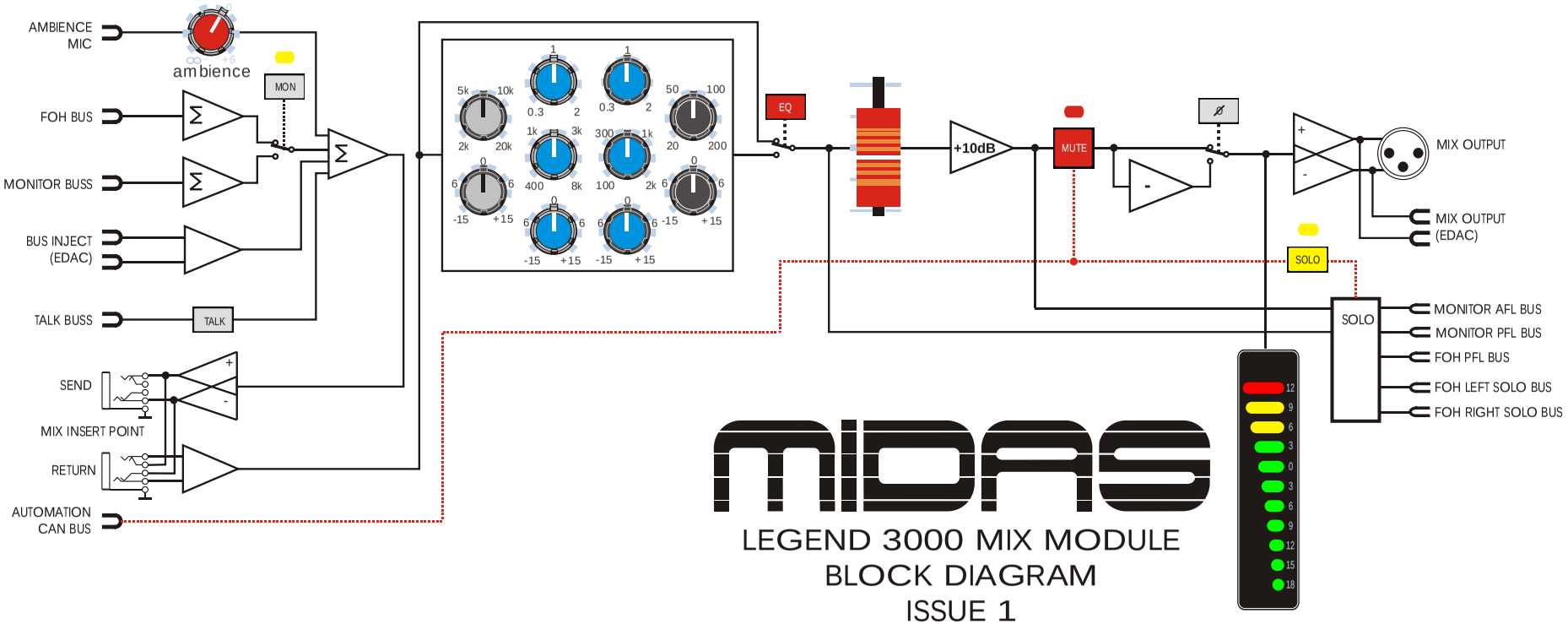
LEGEND 3000 METERS MODULE
BLOCK DIAGRAM
ISSUE 1
DATE 9 - 02 - 02



THESE METERS AUTOMATICALLY SWITCH BETWEEN
LEFT / CENTER / RIGHT / AMBIENCE
AND
FOH SOLO LEFT / CENTER / RIGHT / MONO MONITOR SOLO
IF A SOLO SWITCH IS PRESSED

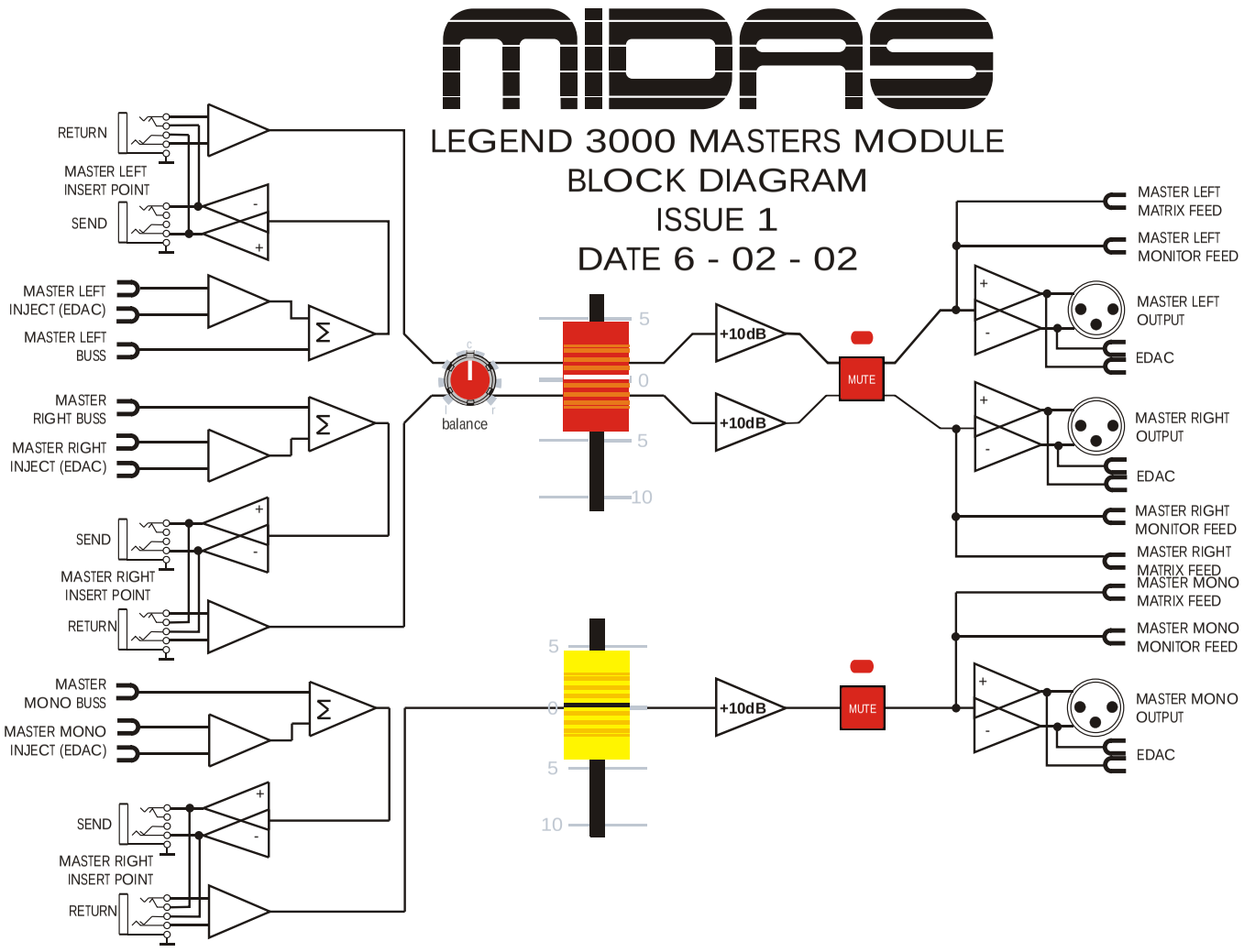
IF THE PFL SWITCH IN THE MONITOR
SECTION IS SELECTED THE AUTOMATIC MONITOR FUNCTION BECOMES
NOTHING / FOH PFL / NOTHING / MONITOR PFL

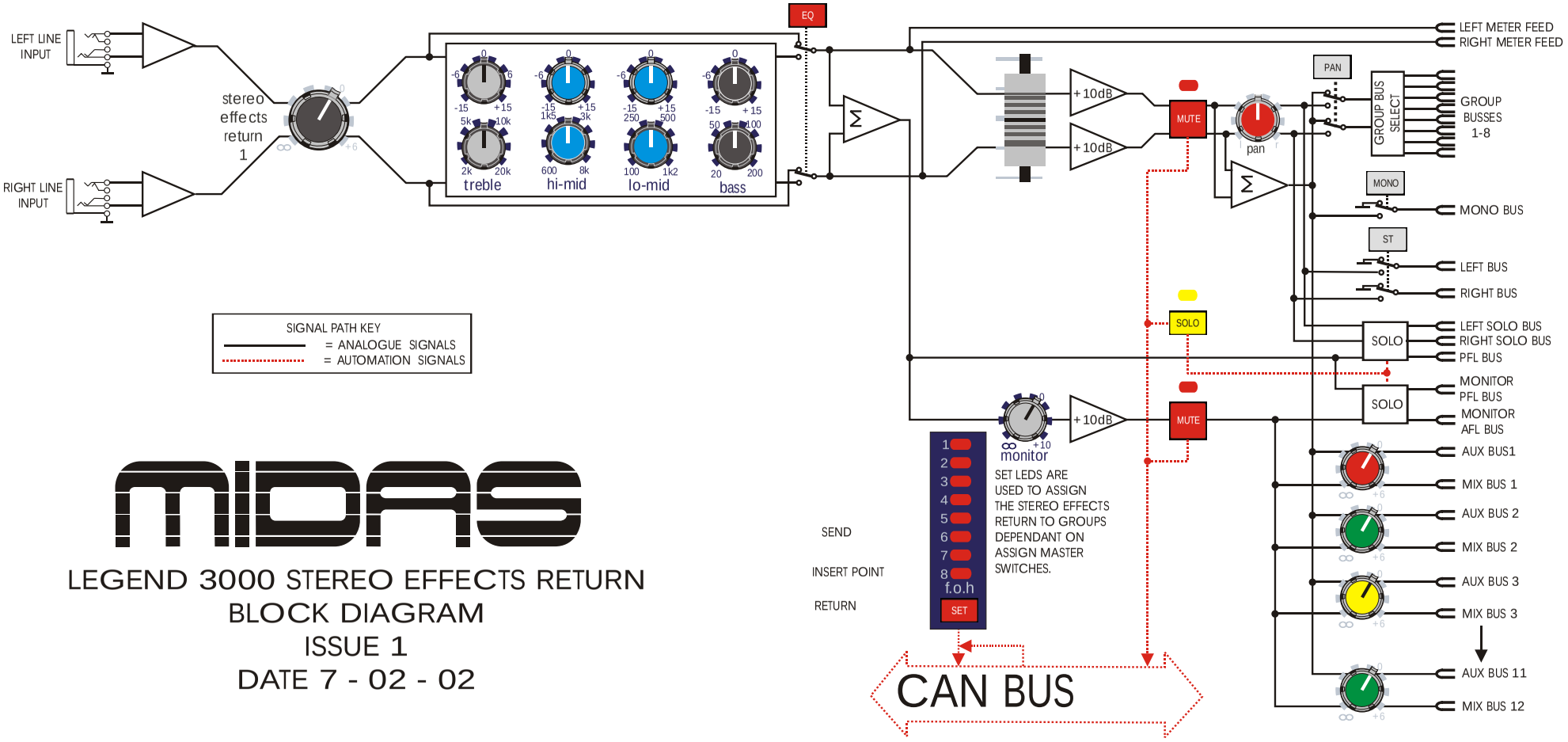

MIDAS
LEGEND 3000 TALK MODULE
BLOCK DIAGRAM
ISSUE 1
DATE 8 - 02 - 02
PHANTOM
+48
gain
MIC REAR PANEL INPUT
treble
hi-mid
bass
lo-mid
AMBIENCE BUS
dimmers
littlite
LITTLITES
led
LED BUS
LEFT TAPE INPUT
RIGHT TAPE INPUT
stereo
mono
ST
MONO
LEFT BUS
RIGHT BUS
MONO BUS
TAPE INPUT LEFT
TAPE INPUT RIGHT
OSC
PINK
ON
frequency
level
ST
MONO
GRP
1-4
GRP
5-8
MTX
1-6
EXT
STEREO TALK
MONO TALK
GROUP 1-4 TALK
GROUP 5-8 TALK
MATRIX TALK
TALK EXTERNAL REAR PANEL OUTPUT
TALK BACK MIC INPUT
NEUTRIK
mic
ON
level
MONITOR DIM
TALK EXTERNAL REAR PANEL INPUT
+48V
rev tb
SOLO
SOLO
LEFT SOLO BUS
RIGHT SOLO BUS
PFL BUS
MONITOR PFL BUS
MONITOR AFL BUS
SOLO LOGIC BUS



MIDAS

LEGEND 3000 MIX MODULE
BLOCK DIAGRAM
ISSUE 1
DATE 6 - 02 - 02


LEGEND 3000 MASTERS MODULE
BLOCK DIAGRAM
ISSUE 1
DATE 6 - 02 - 02
RETURN
MASTER LEFT INSERT POINT
SEND
MASTER LEFT INJECT (EDAC)
MASTER LEFT BUSS
MASTER RIGHT BUSS
MASTER RIGHT INJECT (EDAC)
SEND
MASTER RIGHT INSERT POINT
RETURN
MASTER MONO BUSS
MASTER MONO INJECT (EDAC)
SEND
MASTER RIGHT INSERT POINT
RETURN
balance
5
0
5
10
+10dB
+10dB
MUTE
5
0
5
10
+10dB
MUTE
MASTER LEFT MATRIX FEED
MASTER LEFT MONITOR FEED
MASTER LEFT OUTPUT
EDAC
MASTER RIGHT OUTPUT
EDAC
MASTER RIGHT MONITOR FEED
MASTER RIGHT MATRIX FEED
MASTER MONO MATRIX FEED
MASTER MONO MONITOR FEED
MASTER MONO OUTPUT
EDAC

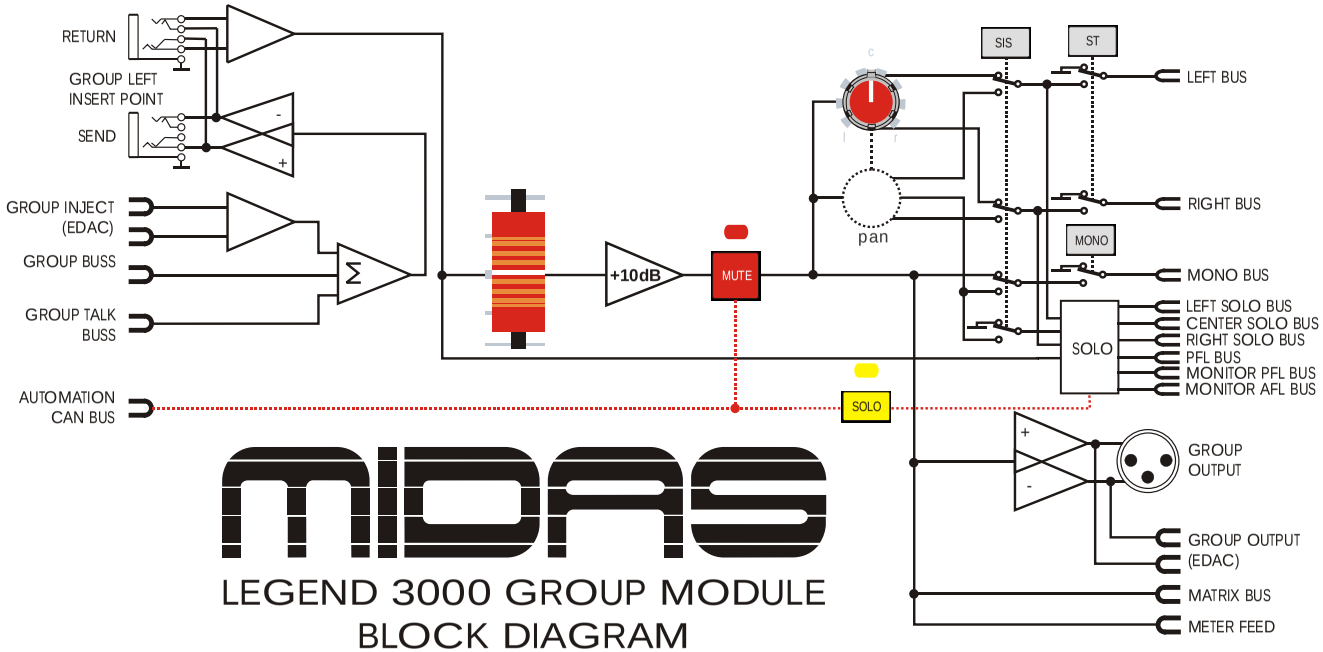


MIDAS

LEGEND 3000 STEREO EFFECTS RETURN BLOCK DIAGRAM

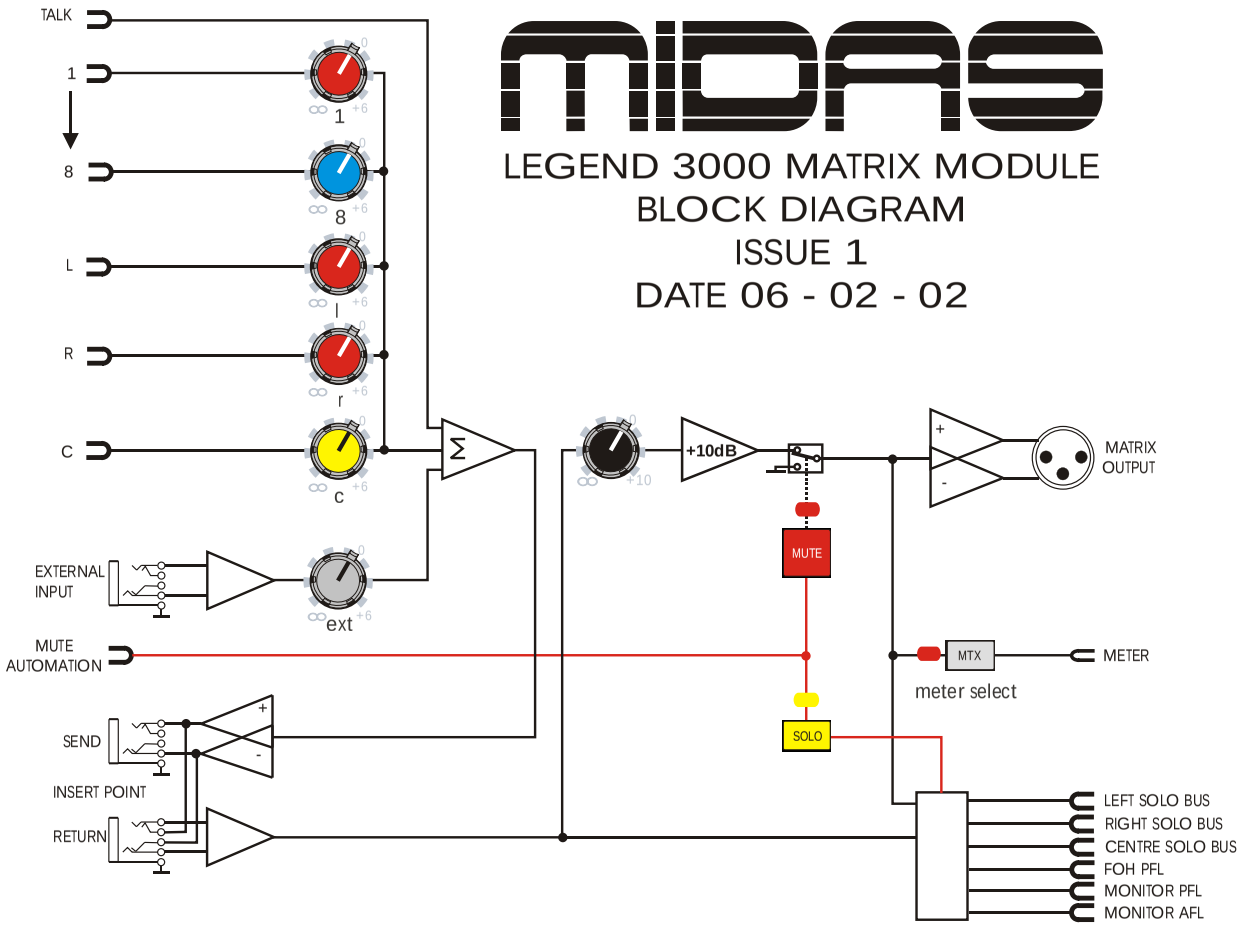
ISSUE 1

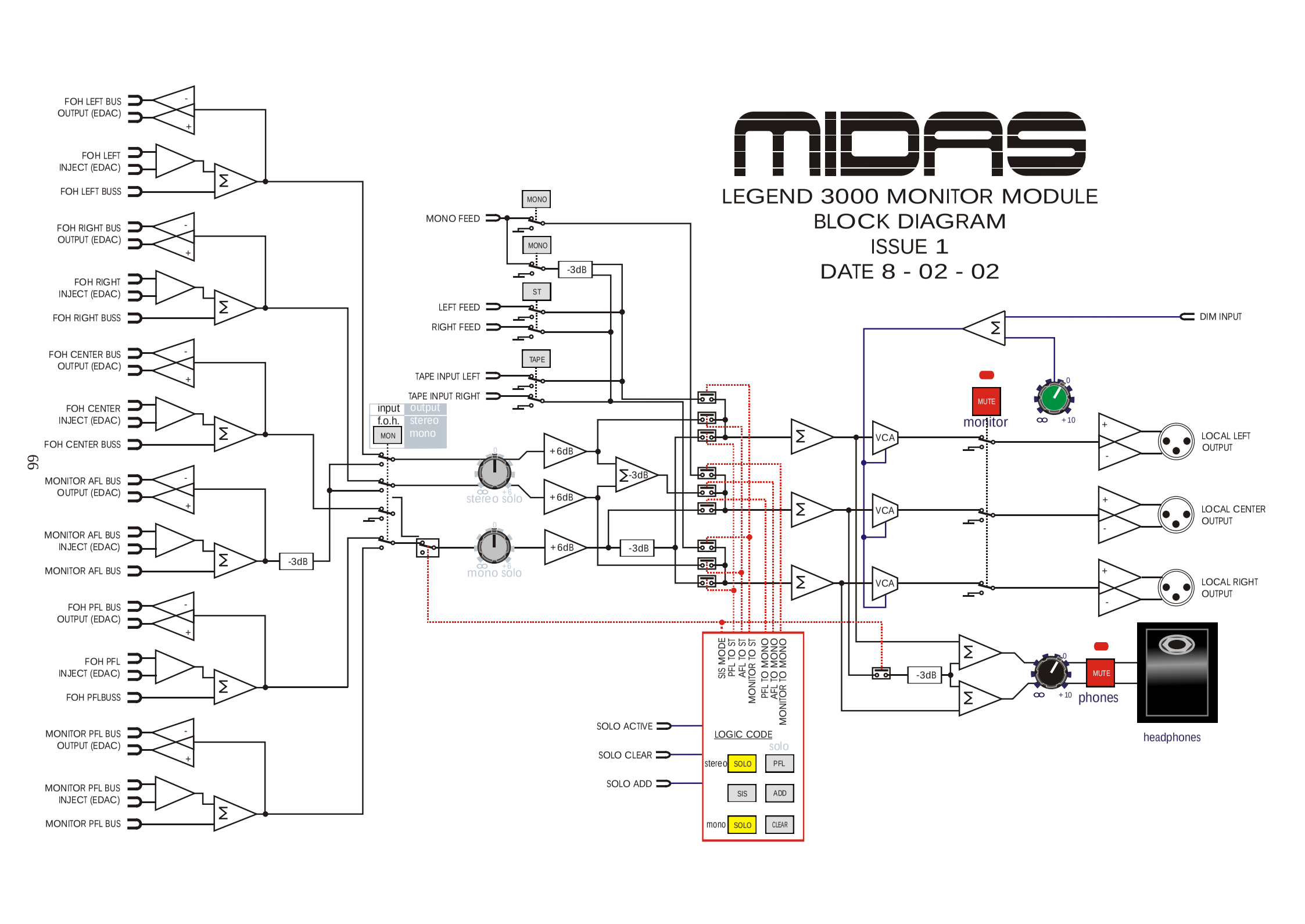
DATE 7 - 02 - 02



MIDAS

LEGEND 3000 GROUP MODULE
BLOCK DIAGRAM
ISSUE 1
DATE 6 - 02 - 02


MIDAS
LEGEND 3000 MATRIX MODULE
BLOCK DIAGRAM
ISSUE 1
DATE 06 - 02 - 02
TALK
1
8
L
R
C
EXTERNAL INPUT
MUTE AUTOMATION
SEND
INSERT POINT
RETURN
+10dB
MUTE
SOLO
MTX
MATRIX OUTPUT
METER
meter select
LEFT SOLO BUS
RIGHT SOLO BUS
CENTRE SOLO BUS
FOH PFL
MONITOR PFL
MONITOR AFL


MIDAS
LEGEND 3000 MONITOR MODULE
BLOCK DIAGRAM
ISSUE 1
DATE 8 - 02 - 02
FOH LEFT BUS OUTPUT (EDAC)
FOH LEFT INJECT (EDAC)
FOH LEFT BUSS
FOH RIGHT BUS OUTPUT (EDAC)
FOH RIGHT INJECT (EDAC)
FOH RIGHT BUSS
FOH CENTER BUS OUTPUT (EDAC)
FOH CENTER INJECT (EDAC)
FOH CENTER BUSS
MONITOR AFL BUS OUTPUT (EDAC)
MONITOR AFL BUS INJECT (EDAC)
MONITOR AFL BUS
-3dB
FOH PFL BUS OUTPUT (EDAC)
FOH PFL INJECT (EDAC)
FOH PFLBUSS
MONITOR PFL BUS OUTPUT (EDAC)
MONITOR PFL BUS INJECT (EDAC)
MONITOR PFL BUS
MONO FEED
MONO
MONO
-3dB
ST
LEFT FEED
RIGHT FEED
TAPE
TAPE INPUT LEFT
TAPE INPUT RIGHT
input
output
f.o.h.
stereo
MON
mono
+6dB
+6dB
stereo solo
+6dB
-3dB
-3dB
mono solo
DIM INPUT
VCA
VCA
VCA
MUTE
monitor
LOCAL LEFT OUTPUT
LOCAL CENTER OUTPUT
LOCAL RIGHT OUTPUT
-3dB
MUTE
phones
headphones
SIS MODE
PFL TO ST
AFL TO ST
MONITOR TO ST
PFL TO MONO
AFL TO MONO
MONITOR TO MONO
SOLO ACTIVE
SOLO CLEAR
SOLO ADD
LOGIC CODE
solo
stereo
SOLO
PFL
SIS
ADD
mono
SOLO
CLEAR

Specification and Overview

LEGEND 3000 SPECIFICATION OVERVIEW AND STATISTICS.

1. The Legend 3000 is a 29 buss console with an additional 12 x 6 output matrix. The busses are as follows:-

8	audio groups	= 8
12	mono aux	= 12
1	stereo master	= 2
1	mono master	= 1
1	stereo AFL	= 2
1	mono PFL	= 1
1	mon AFL	= 1
2	monitor solos	= 2
	TOTAL	= 29

2. The Legend 3000 has 10 VCA sub groups which include VCA sub group muting.

3. The Legend 3000 XLR input count is a follows:-

XLR Input count	Frame Size (Mic Input	Talk Mic Inputs	Ambient Mic Input
51	48	2	1
43	40	2	1
35	32	2	1
27	24	2	1

4. The Legend 3000 has a total XLR output count of 33 as follows:-

8	audio group outputs
12	aux outputs
6	matrix outputs
3	master outputs
3	local outputs
1	talk external output

6. The Legend 3000 has a total of balanced ¼ inch jacks for inserts as follows:-

Frame Size	Balanced ¼" Jack Inserts	Input channel insert sends	Input channel insert returns	Audio group insert sends	Audio group insert returns	Aux insert sends	Aux insert returns	Matrix insert sends
48	264	48	48	8	8	12	12	6
40	232	40	40	8	8	12	12	6
32	200	32	32	8	8	12	12	6
24	168	24	24	8	8	12	12	6

Frame Size	Balanced ¼" Jack Inserts	Matrix insert returns	Master insert sends	Master insert returns	Channel direct outputs	Channel line inputs	Stereo effects inputs	Matrix external inputs
48	264	6	3	3	48	48	8	6
40	232	6	3	3	40	40	8	6
32	200	6	3	3	32	32	8	6
24	168	6	3	3	24	24	8	6

7. The Legend 3000 has 60*(48 frame)* 52 *(40 frame)* 44 *(32 frame)* 36 *(24 frame)* long throw faders for mix control and 72 *(48 frame)* 64 *(40 frame)* 56 *(32 frame)* 48 *(24 frame)* short throw faders.

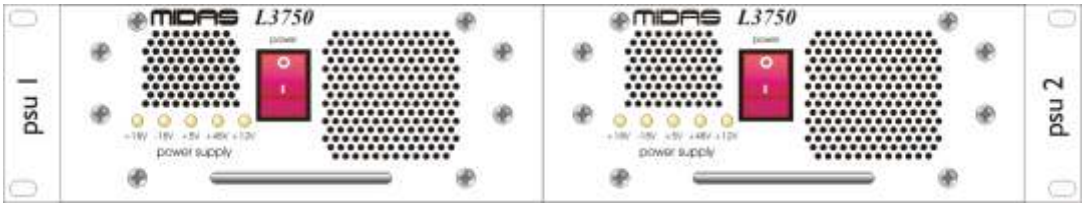
8. The Legend 3000 has a total of 72 *(48 frame)* 64 *(40 frame)* 56 *(32 frame)* 48 *(24 frame)* peak program meters with 11 LED segments on all outputs and 7 LED segments on input channels.

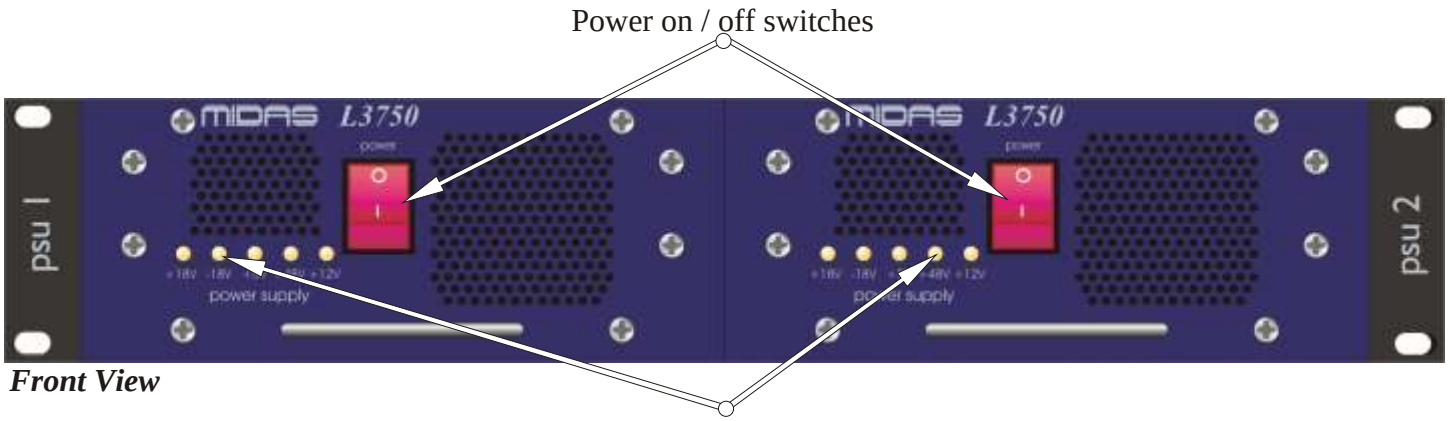
LEGEND 3000 TECHNICAL SPECIFICATIONS.

Input Impedance	Mic	2k Balanced
	Line	20k Balanced
Input Gain (all faders at 0dB)	Mic	Continuously variable from + 15dB to + 60dB
	Mic + Pad	Continuously variable from - 15dB to + 30dB
	Line Level Inputs	0dB
Maximum Input Level	Mic	+ 6dBu
	Mic + Pad	+ 31dBu
	Line Level Inputs	+ 21dBu
CMR at 1kHz	Mic (gain + 40dB)	> 80dB
	Mic + Pad (gain 0dB)	> 50dB
Frequency Response (20 to 20kHz)	Mic to Mix (gain + 40dB)	+ 0dB to - 1dB
Noise (20 to 20kHz)	Mic EIN ref. 150Ω (gain + 60dB)	- 128dBu
System Noise (20 to 20kHz)		
	Summing Noise (48 channels routed with faders down)	- 80dB
	Line to Mix Noise (48 channels routed at 0dB, pan centre)	- 75dB
Distortion at 1kHz	Mic to Mix (+ 40dB gain, 0dBu output)	< 0.05%
Crosstalk at 1kHz	Channel to Mix	< - 80dB
	Maximum Fader attenuation	> 70dB
Output Impedance	All Line Outputs	50 Ohms Balanced Source to drive > 600Ω
	Headphones	To drive > 8Ω
Maximum Output Level	All Line Outputs	+ 21dBu
	Headphones	+ 21dBu

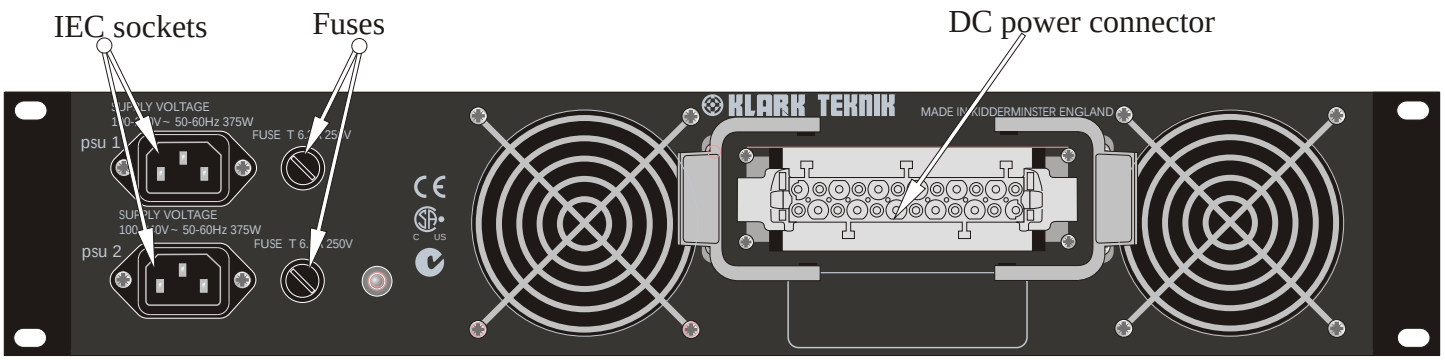
Nominal Signal Level	Mic	- 60dBu to + 10dBu
	Line	0dBu
	Headphones	+ 10dBu
Equaliser *FOH & MON input*	Hi pass Slope	12dB / Oct
	Hi pass Frequency	Continuously variable - 3dB point from 20Hz to 400Hz
FOH input & MON output	Treble Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
	Treble Shelving Freq.	Continuously variable - 3dB point from 2KHz to 20KHz
	Hi Mid Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
	Hi Mid Freq.	Continuously variable Centre from 400Hz to 8KHz
	Hi Mid Bandwidth	Continuously variable 0.1 Oct. to 2 Oct Centre detent = 0.4 Oct
	Lo Mid Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
	Lo Mid Freq.	Continuously variable Centre from 100Hz to 2KHz
	Lo Mid Bandwidth	Continuously variable 0.1 Oct. to 2 Oct Centre detent = 0.4 Oct
	Bass Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
	Bass Shelving Freq.	Continuously variable - 3dB point from 20Hz to 400Hz
MON input	Hi Mid Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
	Hi Mid Freq.	Continuously variable Centre from 400Hz to 16KHz
	Lo Mid Gain	Continuously variable + 15 dB to - 15 dB Centre detent = 0dB
	Lo Mid Freq.	Continuously variable Centre from 50Hz to 2Khz

MIDAS L3750 Power Supply



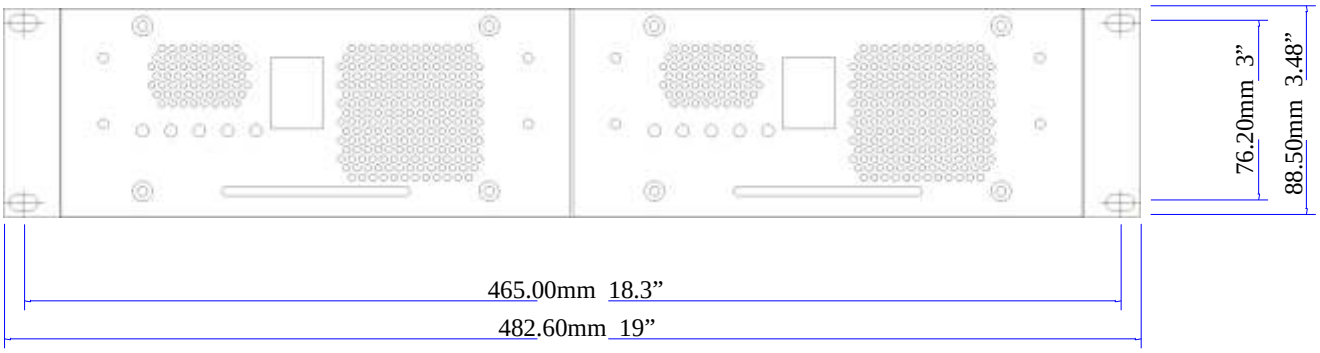


Front View



Rear View

Measurements and Specifications

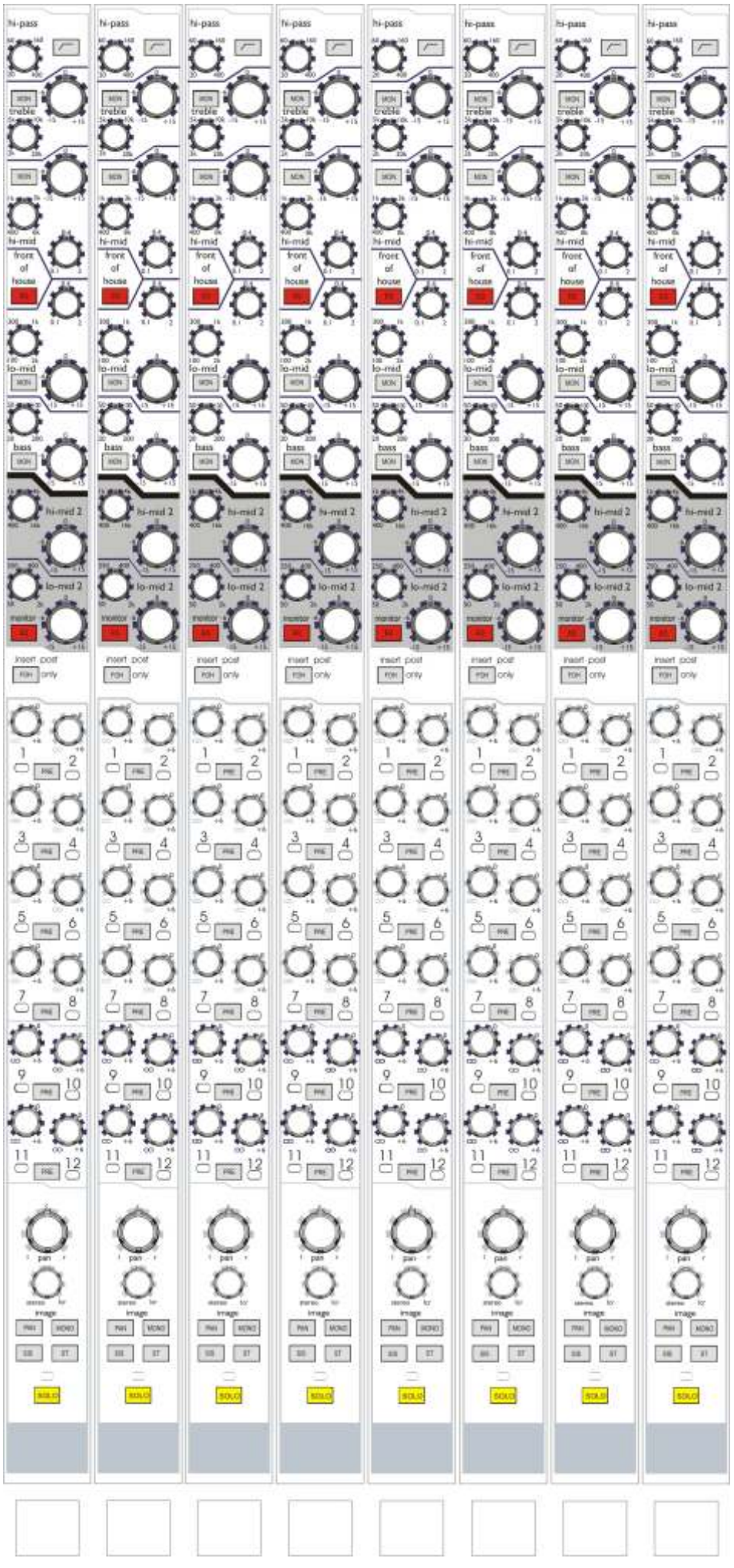


Dimensions and Weights

Width:	482.6mm	19.00”
Height 2U:	88.50mm	3.48”
Depth:	372.0mm	14.65”
Depth *(incl. connectors)*:	418.0mm	16.56”
Weight:	13.0Kg	28.6lbs

Specifications

Input Voltage Range:	100-240VAC
Maximum Output Power:	375W
Operating Temperature:	0-50°C



Input Crib Sheet

Inputs
____to____

Notes:

Input No

MIDAS
DESIGNED FOR A PURE PERFORMANCE